ZS-X3CP

SERVICE MANUAL

Ver 1.2 2002.10

US Model
Canadian Model
AEP Model
UK Model

Model Name Using Similar Mechanism	NEW
CD Mechanism Type	KSM-900AAA
Optical Pick-up Name	KSS-900A

SPECIFICATIONS

AUDIO POWER SPECIFICATIONS (US model only)

POWER OUTPUT AND TOTAL HARMONIC DISTORTION

With 3.2-ohm loads, both channels driven from 150 - 10,000 Hz; rated 1.8 W per channel-minimum RMS power, with no more than 10 % total harmonic distortion in AC operation.

Other Specifications

CD player section

System
- Compact disc digital audio system

Laser diode properties
- Material: GaAlAs
- Wave length: 780 nm
- Emission duration: Continuous
- Laser output: Less than 44.6 µW
- (This output is the value measured at a distance of about 200 mm from the objective lens surface on the optical pick-up block with 7 mm aperture.)

Spindle speed
- 200 r/min (rpm) to 500 r/min (rpm) (CLV)

Number of channels
- 2

Frequency response
- 20 - 20 000 Hz +1/–2 dB

Wow and flutter
- Below measurable limit

Radio section

Frequency range
- FM: 87.5 - 108 MHz
- AM: 530 - 1 710 kHz (US, Canadian models)
- MW:531 - 1 611 kHz (9 kHz step) (Except US, Canadian models)
- 530 - 1 610 kHz (10 kHz step) (Except US, Canadian models)
- LW: 153 - 279 kHz (Except US, Canadian models)

IF
- FM: 10.7 MHz (Except US, Canadian models)
- MW/LW: 450 kHz (Except US, Canadian models)

Antennas
- FM: Telescopic antenna
- AM: Built-in ferrite bar antenna

General

Speaker
- Full range: 10 cm (4 in.) dia., 3.2 Ω, cone type (2)

Outputs
- Headphones jack (stereo minijack)
- For 16 - 68 Ω impedance headphones

Power output
- 2.3 W + 2.3 W (at 3.2 Ω, 10 % harmonic distortion)

Power requirements
- DC IN 9V jack accepts:
- Supplied AC power adaptor for use with 120 V AC, 60 Hz (US, Canadian models)
- Supplied AC power adaptor for use with 230 V AC, 50 Hz (Except US, Canadian models)
- 9 V DC, 6 size D (R20) batteries

Battery life
- For CD playback:
- Sony R20P: approx. 7.5 h
- Sony alkaline LR20: approx. 14 h

Dimensions
- Approx. 430 × 172 × 287.5 mm (w/h/d)
- (17 × 6 ⅞ × 11 ⅜ inches) (incl. projecting parts)

Mass
- Approx. 4.6 kg (7 lb. 11 oz) (incl. batteries)

Supplied accessories
- AC power adaptor (1)

Design and specifications are subject to change without notice.

PERSONAL AUDIO SYSTEM

9-873-537-03
2002J0500-1
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Personal Audio Company
Published by Sony Engineering Corporation

SONY®

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CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located at the bottom.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 ˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC leakage.
Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers’ instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The “limit” indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

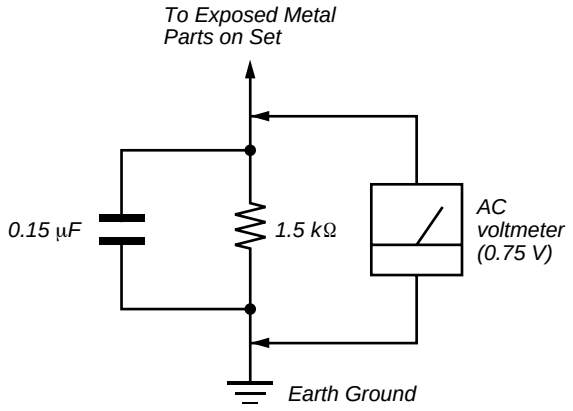


Fig. A. Using an AC voltmeter to check AC leakage.

About CD-Rs/CD-RWs and MP3 files

This player can play CD-Rs/CD-RWs recorded in the CD-DA format* and MP3 files recorded in the CD-ROM format, but playback capability may vary depending on the quality of the disc and the condition of the recording device.

* CD-DA is the abbreviation for Compact Disc Digital Audio. It is a recording standard used for Audio CDs.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SECTION 1
SERVICING NOTES

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

LASER DIODE AND FOCUS SEARCH OPERATION CHECK

During normal operation of the equipment, emission of the laser diode is prohibited unless the upper lid is closed while turning ON the S701. (push switch type)
The following checking method for the laser diode is operable.

- **Method**

  Emission of the laser diode is visually checked.

1. Open the upper lid.
2. Push the S701 as shown in Fig.1.

Note: Do not push the detection lever strongly, or it may be bent or damaged.

3. Press the ▶II button.
4. Check the object lens for confirming normal emission of the laser diode. If not emitting, there is a trouble in the automatic power control circuit or the optical pick-up.
   In this operation, the object lens will move up and down 2 times along with inward motion for the focus search.

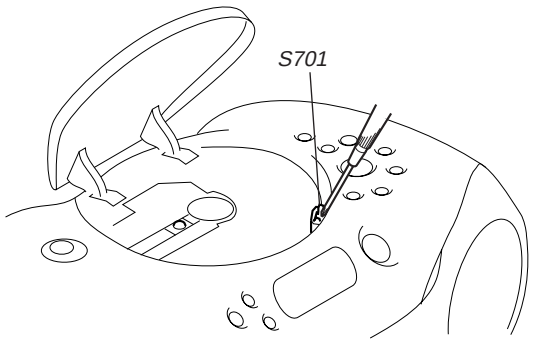
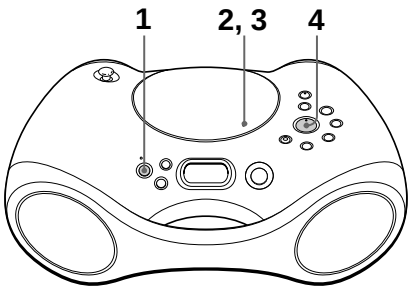


Fig.1 Method to push the S701

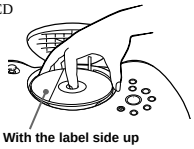
Playing an audio CD or MP3 files



Connect the supplied AC power adaptor (see page 18).

1 Press POWER (US, Canadian models) or OPERATE (Except US, Canadian models) to turn on the player.

2 Press ⏏ PUSH down to open the CD compartment and place the CD on the CD compartment until it clicks into place.

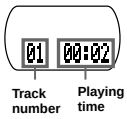


3 Close the lid of the CD compartment.

4 Press ▶II.

The player plays all the tracks once.

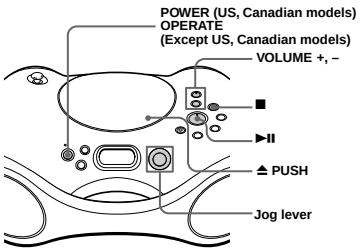
To play a CD with MP3 files, see page 6.



Tip

Playback starts from the track you last stopped playing (Resume play). During stop, the track number to be played are displayed.
To cancel the resume play to start play from the beginning of the first track, press ■ in stop mode.

Use these buttons for additional operations



To	Do this
adjust the volume	Press VOLUME +*, –.
stop playback	Press ■.
pause playback	Press ▶II*. Press the button again to resume play after pause.
go to the next track	Push jog lever toward ▶▶I.
go back to the previous track	Push jog lever toward I◀◀.
remove the CD**	Press ⏏ PUSH.
turn on/off the player	Press POWER. (US, Canadian models) Press OPERATE. (Except US, Canadian models)

* The button has a tactile dot.
**Once you open the CD compartment, the track to start play will change to the beginning of the first track.

continued

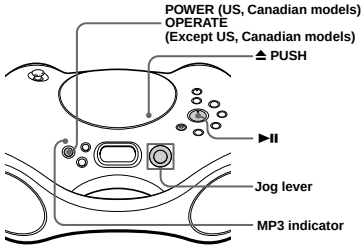
Note

Before playing a file, this player reads all file and folder information on the CD. Depending on the file structure, it may take more than a minute to read them. During this time, "Reading" is displayed.

Tip

You can use the buttons mentioned in the table on page 5 for additional operations in the same way as when playing an audio CD.

Playing a CD with MP3 files



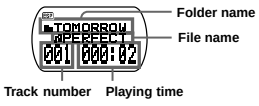
1 Press POWER (US, Canadian models) or ORERATE (Except US, Canadian models) to turn on the player.

2 Press ⏏ PUSH to open the CD compartment and place the CD on the CD compartment (see page 4) .

3 Close the lid of the CD compartment.

4 Press ▶II.

The player plays all MP3 files on the CD.
When you play a CD with MP3 files, the MP3 indicator lights up.



To select a folder

Push the jog lever toward FLDR + to go forward and FLDR – to go backward.

To select a file

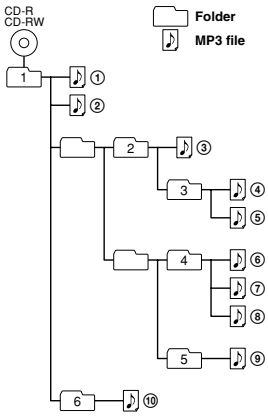
Push the jog lever toward ▶▶I to go forward and I◀◀ to go backward.

Notes

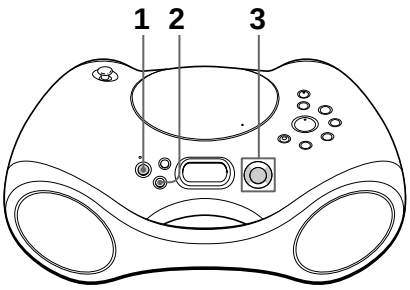
A folder that does not include an MP3 file is skipped.
Maximum number of folders: 255
Maximum number of files: 255
Folder names and file names can be displayed with up to 64 characters.
The characters A - Z, a - z, 0 - 9, and _ can be displayed on this player. Other characters are displayed as Ò?Ó
This player conforms to Version 1.1 of the ID3 tag format. If the file has the ID3 tag information, Òsong titleÓ Òartist nameÓand ÒalbumnameÓcan be displayed.

Example of folder structure and playing order

The playing order of the folders and files is as follows:



Listening to the radio



Connect the supplied AC power adaptor (see page 18).

1

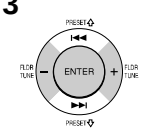
Press POWER (US, Canadian models) or OPERATE (Except US, Canadian models) to turn on the player.

2

Press BAND•AUTO PRESET until the band you want appears in the display.

Display

3

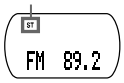


Push the jog lever toward TUNE + or TUNE – and hold it until the frequency digits begin to change in the display.

The player automatically scans the radio frequencies and stops when it finds a clear station.

If you can't tune in a station, push the jog lever toward TUNE + or TUNE – repeatedly to change the frequency step by step.

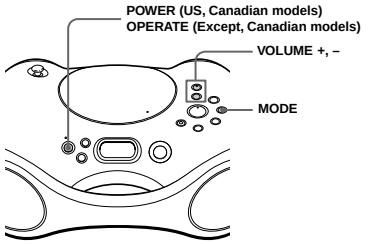
Indicates an FM stereo broadcast



Tip

If the FM broadcast is noisy, press MODE until "Mono" appears in the display and radio will play in monaural.

Use these buttons for additional operations

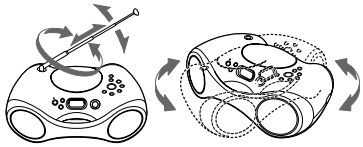


To	Press
adjust the volume	VOLUME +*, –
turn on/off the radio	POWER (US, Canadian models) OPERATE (Except US, Canadian models)

*VOLUME + has a tactile dot.

To improve broadcast reception

Reorient the antenna for FM. Reorient the player itself for AM (US, Canadian models) or MW/LW (Except US, Canadian models).



for FM

for AM (US, Canadian models) MW/LW (Except US, Canadian models)

About "MP3"

What is the MP3?

MP3 (MPEG 1 Audio Layer-3) is a standard technology and format for compressing a sound sequence. The file is compressed to about 1/10 of its original size. Sounds outside the range of human hearing are compressed while the sounds we can hear are not compressed.

Playable "MP3" files on this player

You can only play MP3 files recorded by following requirements.

USABLE MEDIA

CD-Rs and CD-RWs

USABLE DISC FORMAT

You can use ISO 9660 Level 1, Level 2 and Joliet extension format discs. In some cases, MP3 files that are recorded in a format other than these formats may not play normally or the file and folder names may not be displayed correctly.

The major specifications of the usable disc format are as follows:

Maximum directory steps: 8

Usable characters for a file/folder name: A - Z, a - z, 0 - 9, _ (underscore)

Maximum number of characters for a file name: 64 including quotation marks and a 3-character extension code

Notes

When naming, be sure to add the file extension "mp3" to the file name.

If you put the extension "mp3" to a file other than an MP3 file, the player cannot recognize the file properly and will generate random noise that could damage your speakers.

The file name does not correspond to the ID tag.

THE USABLE NUMBER OF FOLDERS/FILES

Maximum folder number: 255

Maximum file number: 255

SETTINGS FOR COMPRESSION SOFTWARE AND WRITING SOFTWARE

To compress a source for an MP3 file, we recommend setting the transfer bit rate of the compression software to "44.1 kHz", "128kbps" and "Constant Bit Rate".

To record up to the maximum capacity, set to the "halting of writing".

To record at one time up to the maximum capacity on media that has nothing recorded it, set to "Disc at Once".

NOTES FOR SAVING FILES ON THE MEDIA

When the disc is inserted, the player reads all the files on that disc. If there are many folders or non-MP3 files on the disc, it may take a long time for play to begin or for the next MP3 file to start play.

Do not save unnecessary folders or files other than MP3 ones in the disc to be used for MP3 listening.

We recommend that you do not save other types files or unnecessary folders on a disc that has MP3 files.

About "ID3 tag"

ID3 tag is a format for adding certain information (song title, artist name, album name, etc.) to MP3 files.

This player conforms to Version 1.1 of the ID3 tag format. If the file has the ID3 tag information, "song title" "artist name" and "album name" can be displayed.

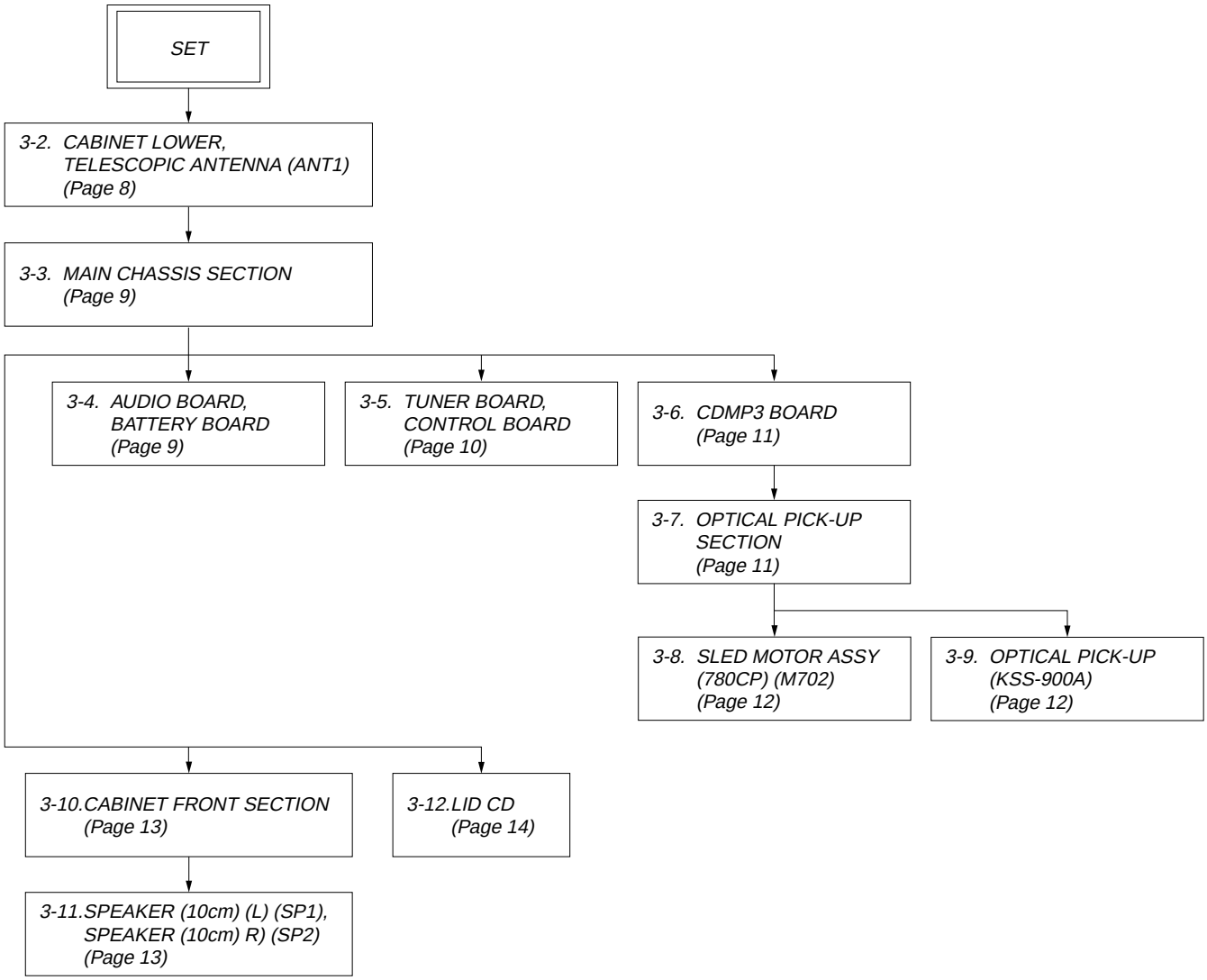
Note

If you use a version other than 1.1, ID3 tag information will not be displayed correctly.

SECTION 3
DISASSEMBLY

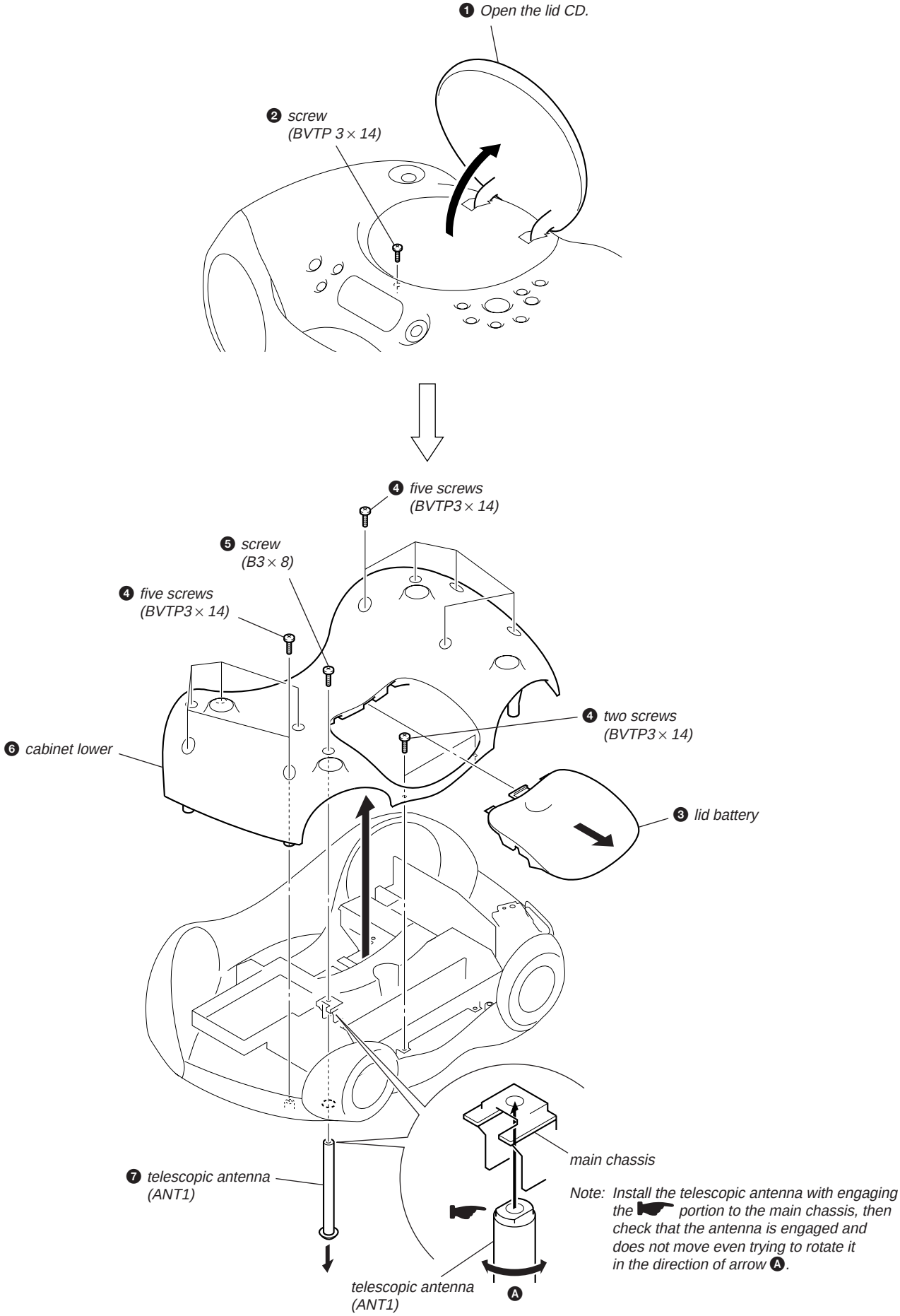
• This set can be disassembled in the order shown below.

3-1. DISASSEMBLY FLOW

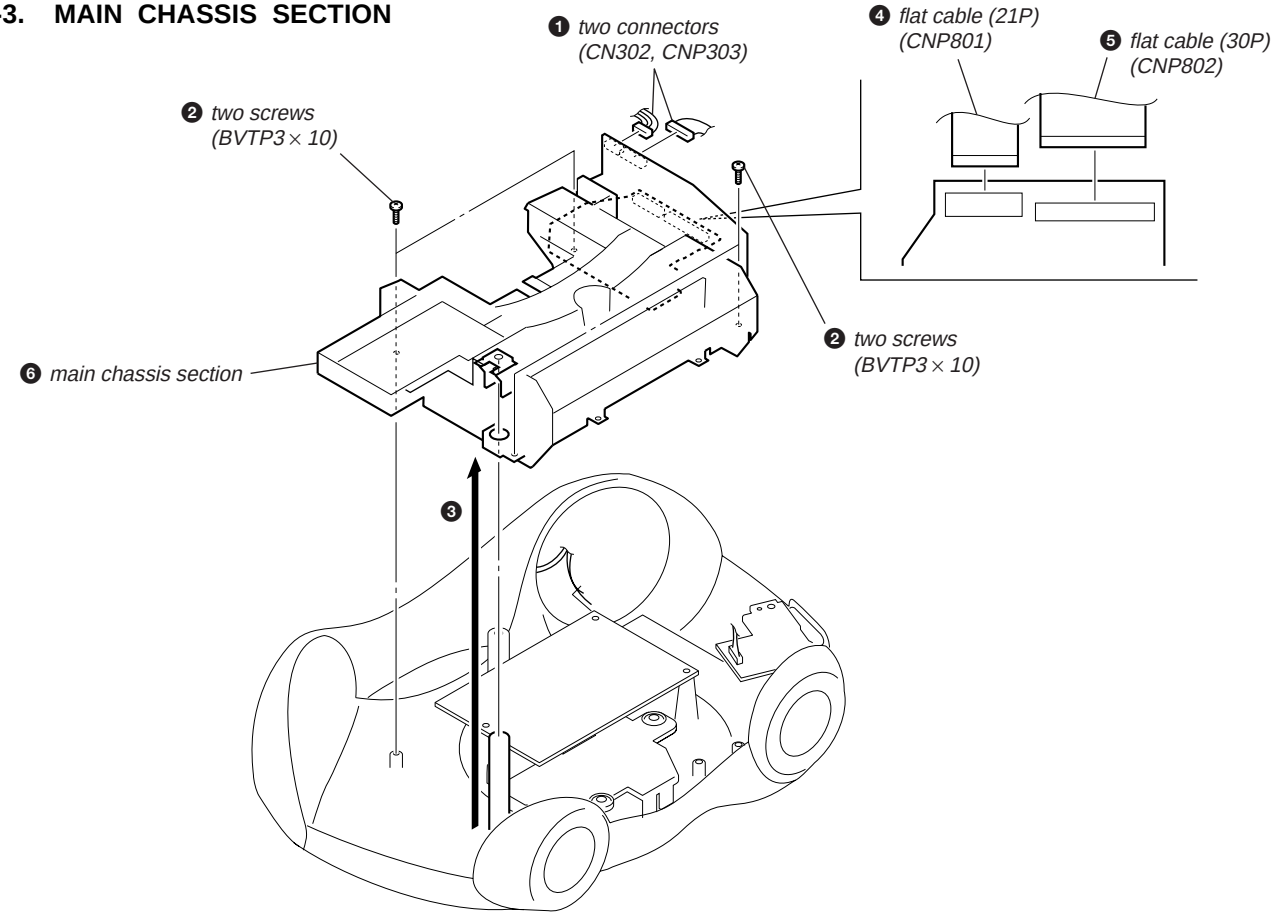

SET
3-2. CABINET LOWER, TELESCOPIC ANTENNA (ANT1) (Page 8)
3-3. MAIN CHASSIS SECTION (Page 9)
3-4. AUDIO BOARD, BATTERY BOARD (Page 9)
3-5. TUNER BOARD, CONTROL BOARD (Page 10)
3-6. CDMP3 BOARD (Page 11)
3-7. OPTICAL PICK-UP SECTION (Page 11)
3-8. SLED MOTOR ASSY (780CP) (M702) (Page 12)
3-9. OPTICAL PICK-UP (KSS-900A) (Page 12)
3-10.CABINET FRONT SECTION (Page 13)
3-11.SPEAKER (10cm) (L) (SP1), SPEAKER (10cm) R) (SP2) (Page 13)
3-12.LID CD (Page 14)

Note: Follow the disassembly procedure in the numerical order given.

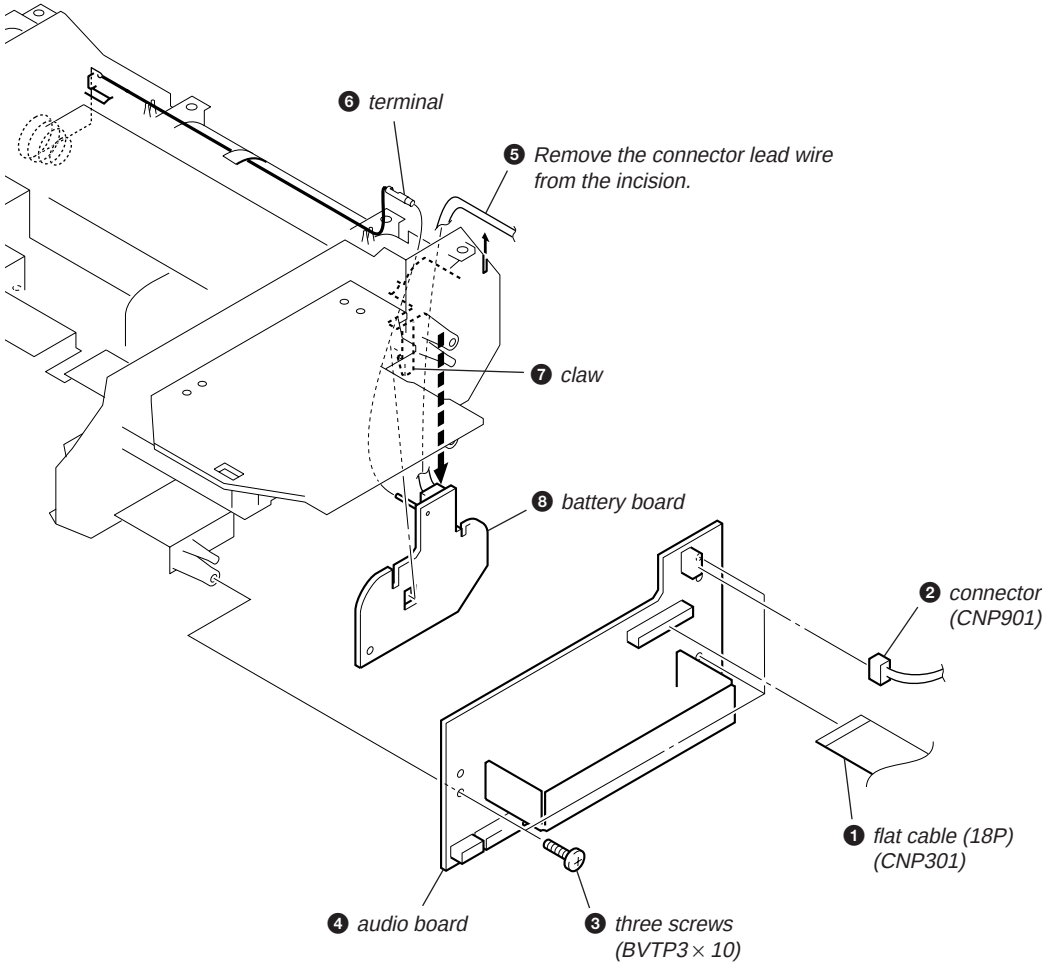
3-2. CABINET LOWER, TELESCOPIC ANTENNA (ANT1)


❶ Open the lid CD.
❷ screw (BVTP 3 × 14)
❹ five screws (BVTP3 × 14)
❺ screw (B3 × 8)
❹ five screws (BVTP3 × 14)
❹ two screws (BVTP3 × 14)
❻ cabinet lower
❸ lid battery
❼ telescopic antenna (ANT1)
main chassis
telescopic antenna (ANT1)
Ⓐ
Note: Install the telescopic antenna with engaging the ☛ portion to the main chassis, then check that the antenna is engaged and does not move even trying to rotate it in the direction of arrow Ⓐ.

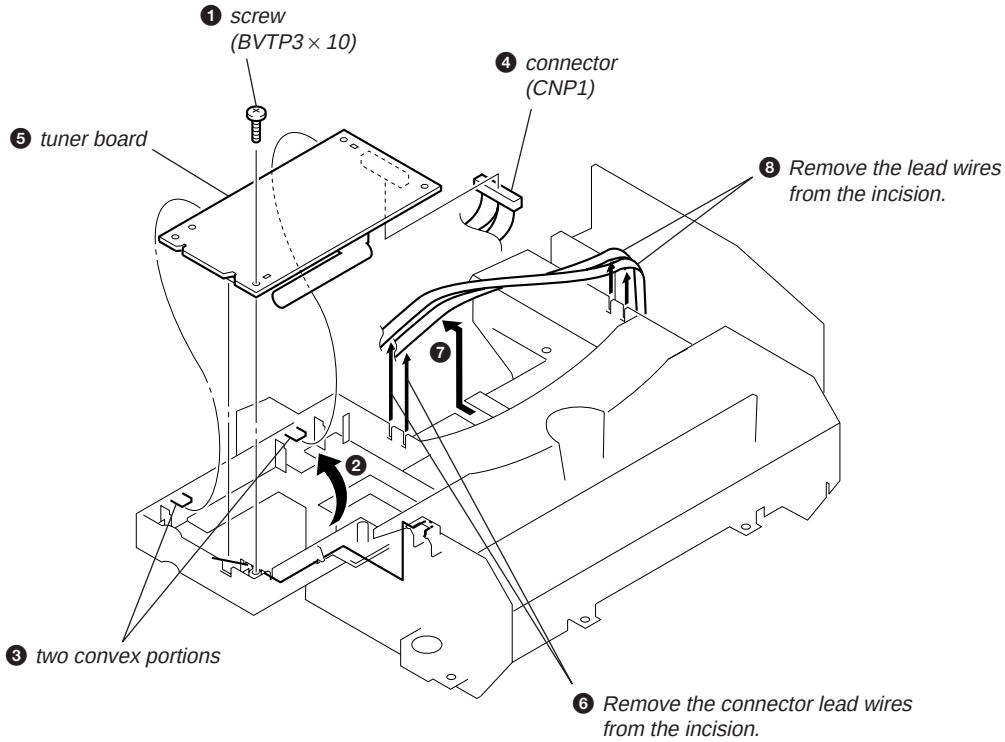
3-3. MAIN CHASSIS SECTION

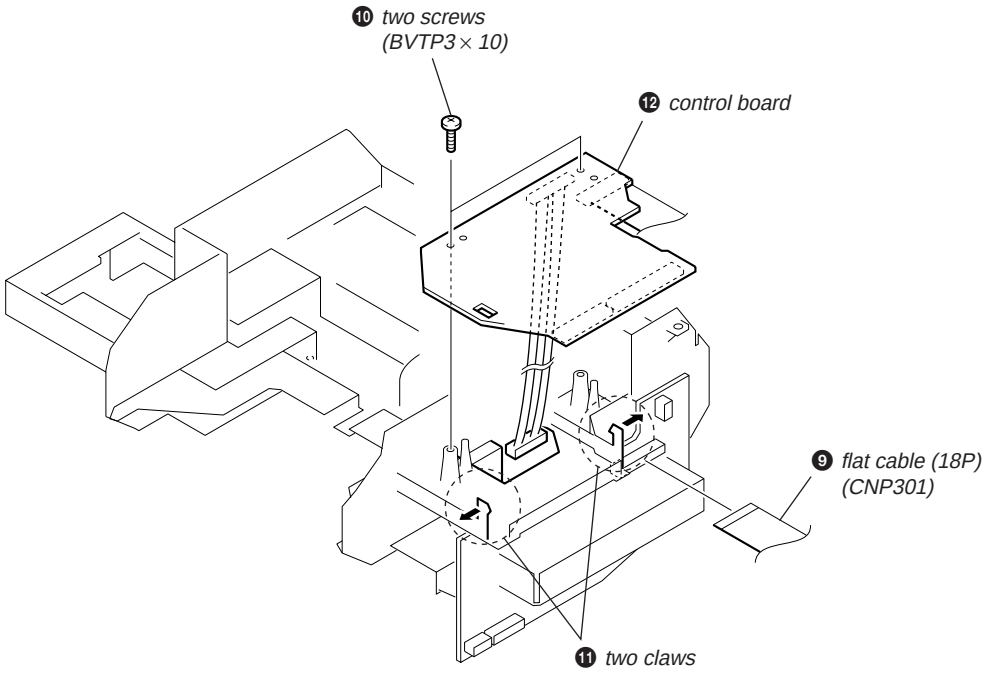

❶ two connectors (CN302, CNP303)
❹ flat cable (21P) (CNP801)
❺ flat cable (30P) (CNP802)
❷ two screws (BVTP3 × 10)
❷ two screws (BVTP3 × 10)
❻ main chassis section
❸

3-4. AUDIO BOARD, BATTERY BOARD

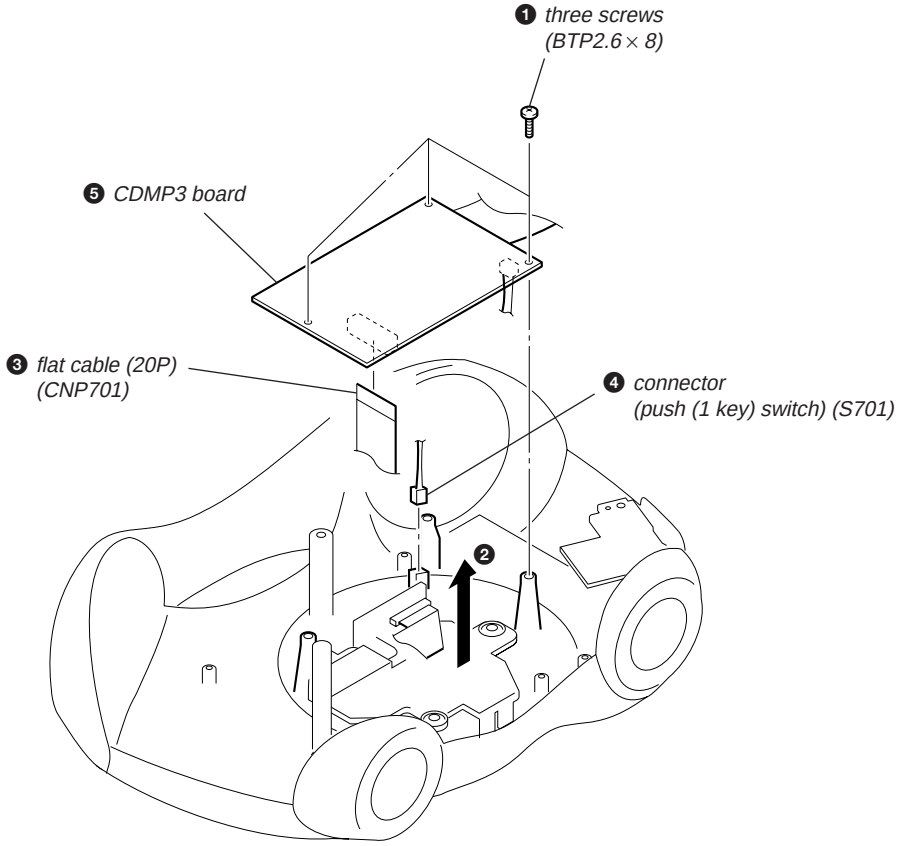

❻ terminal
❺ Remove the connector lead wire from the incision.
❼ claw
❽ battery board
❷ connector (CNP901)
❶ flat cable (18P) (CNP301)
❹ audio board
❸ three screws (BVTP3 × 10)

3-5. TUNER BOARD, CONTROL BOARD

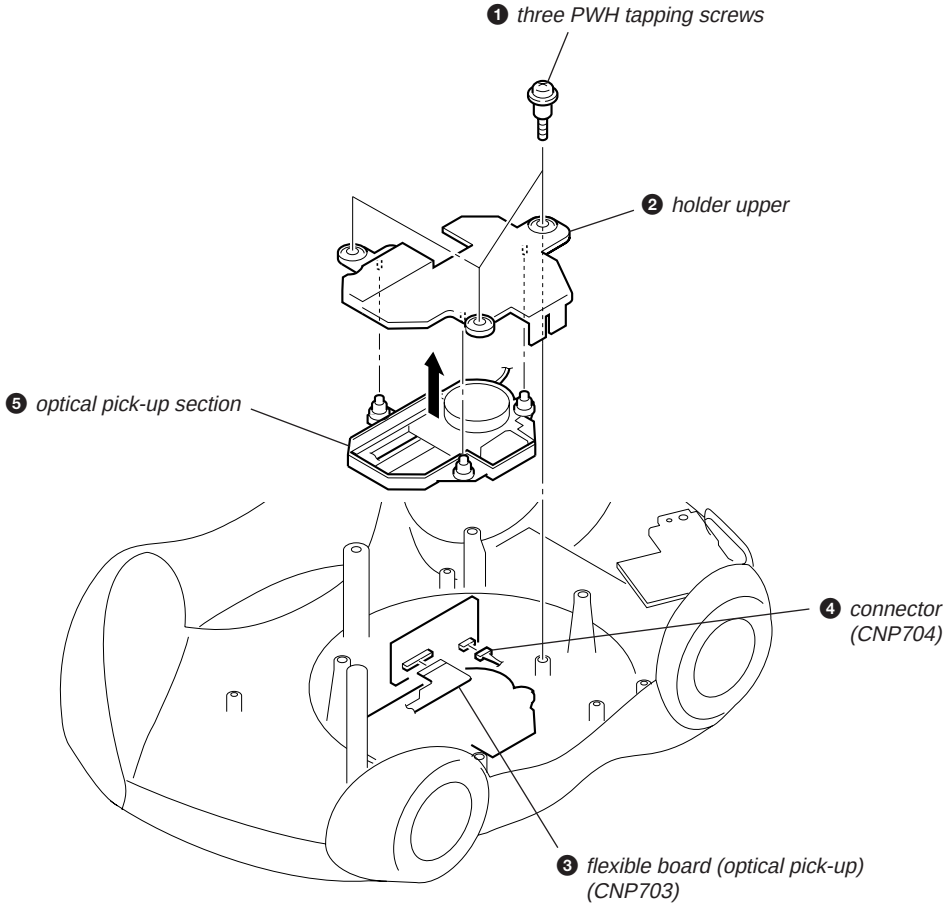




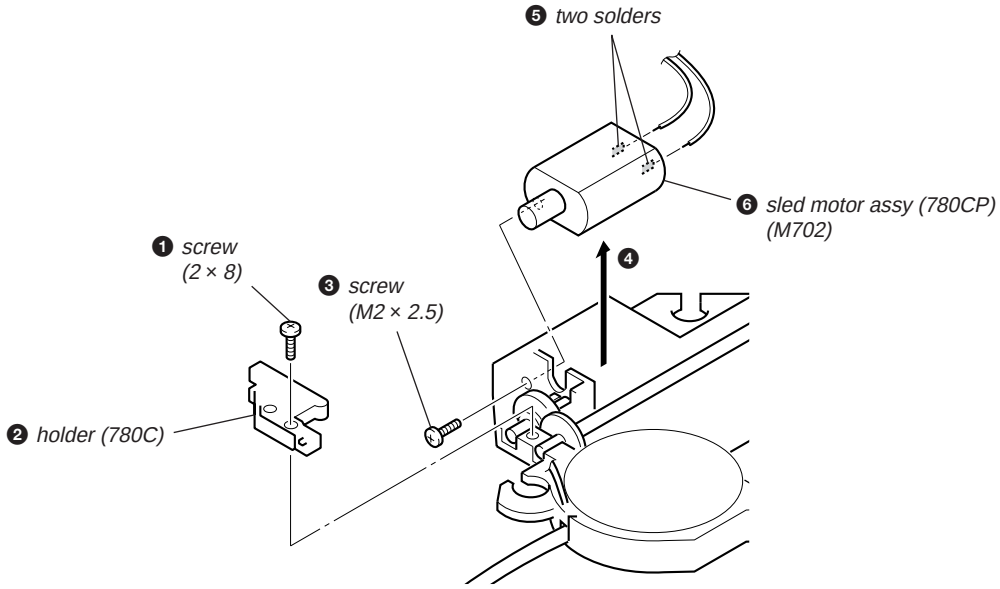
3-6. CDMP3 BOARD



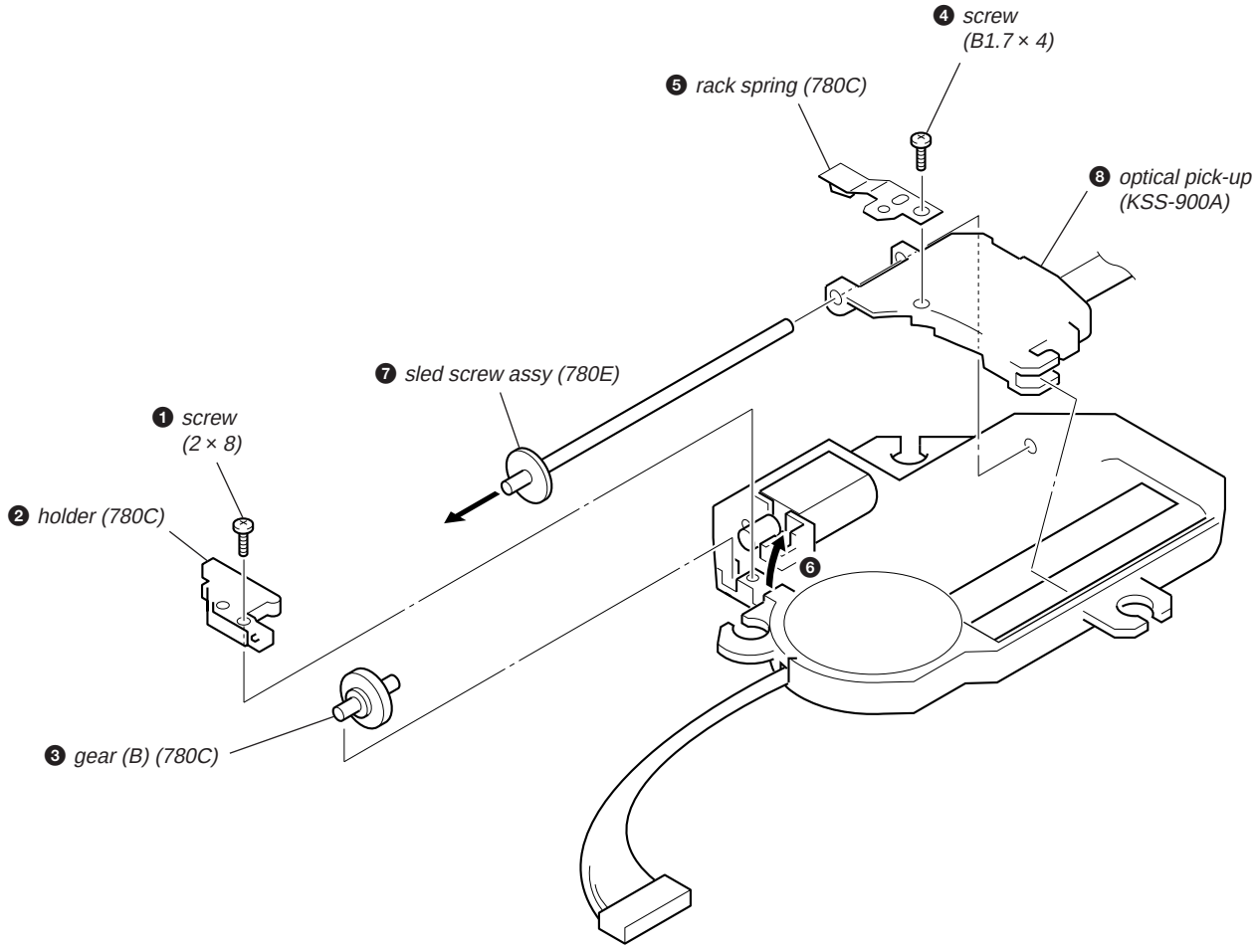
3-7. OPTICAL PICK-UP SECTION



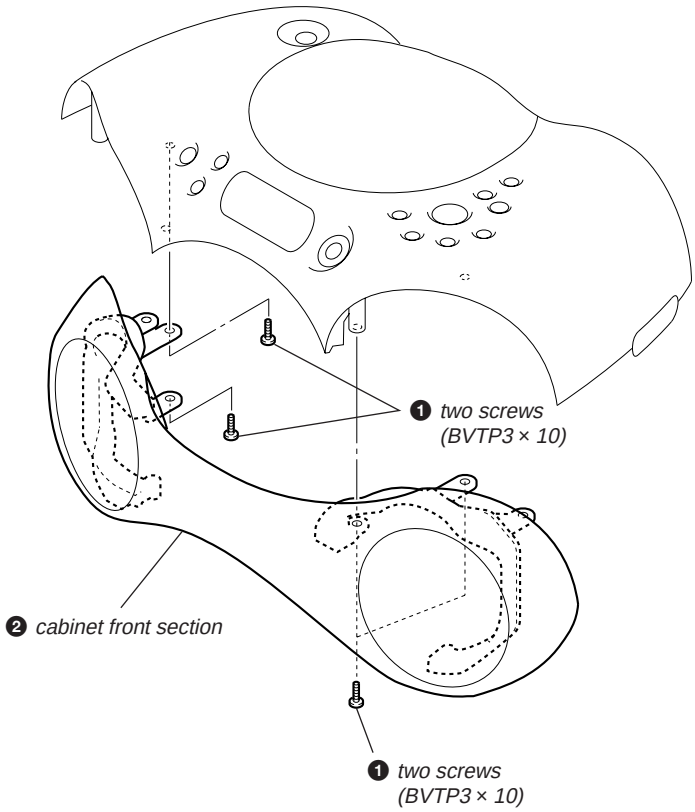
3-8. SLED MOTOR ASSY (780CP) (M702)



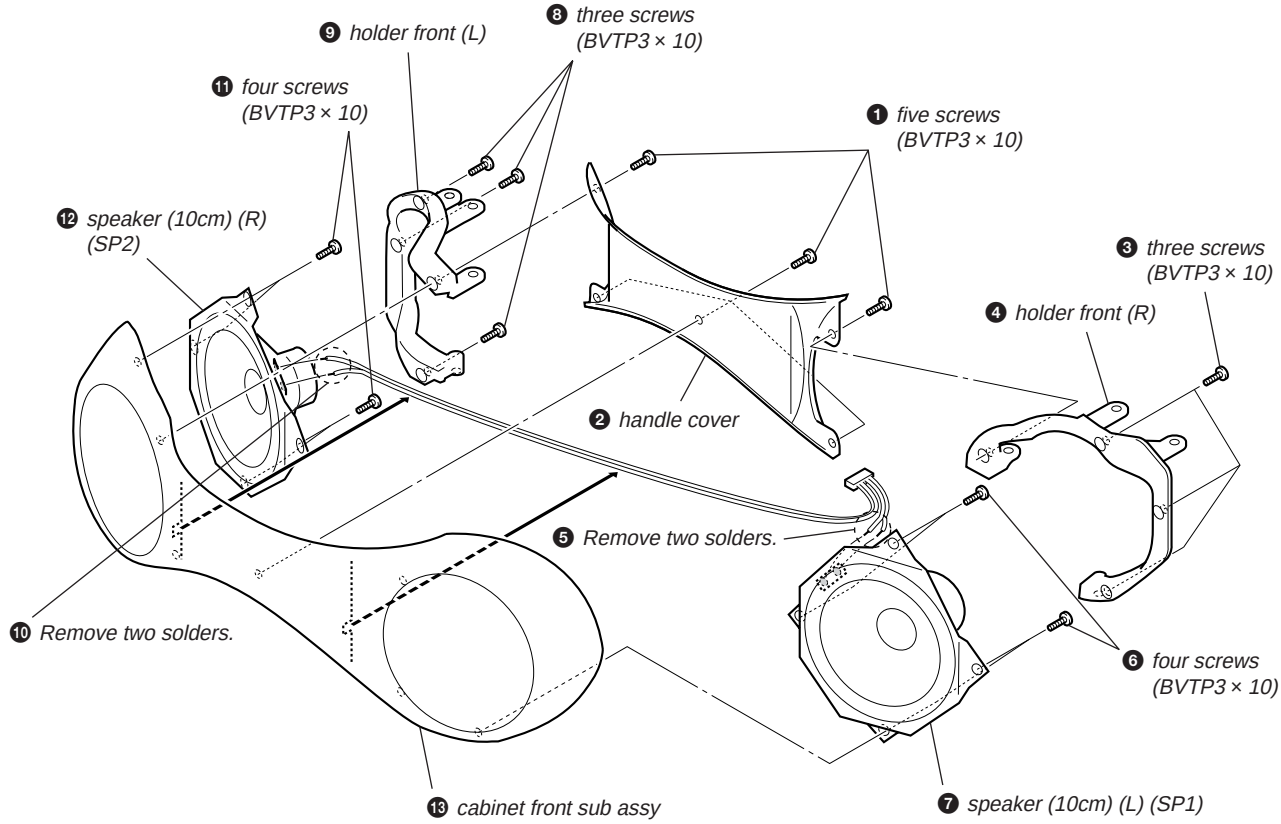
3-9. OPTICAL PICK-UP (KSS-900A)



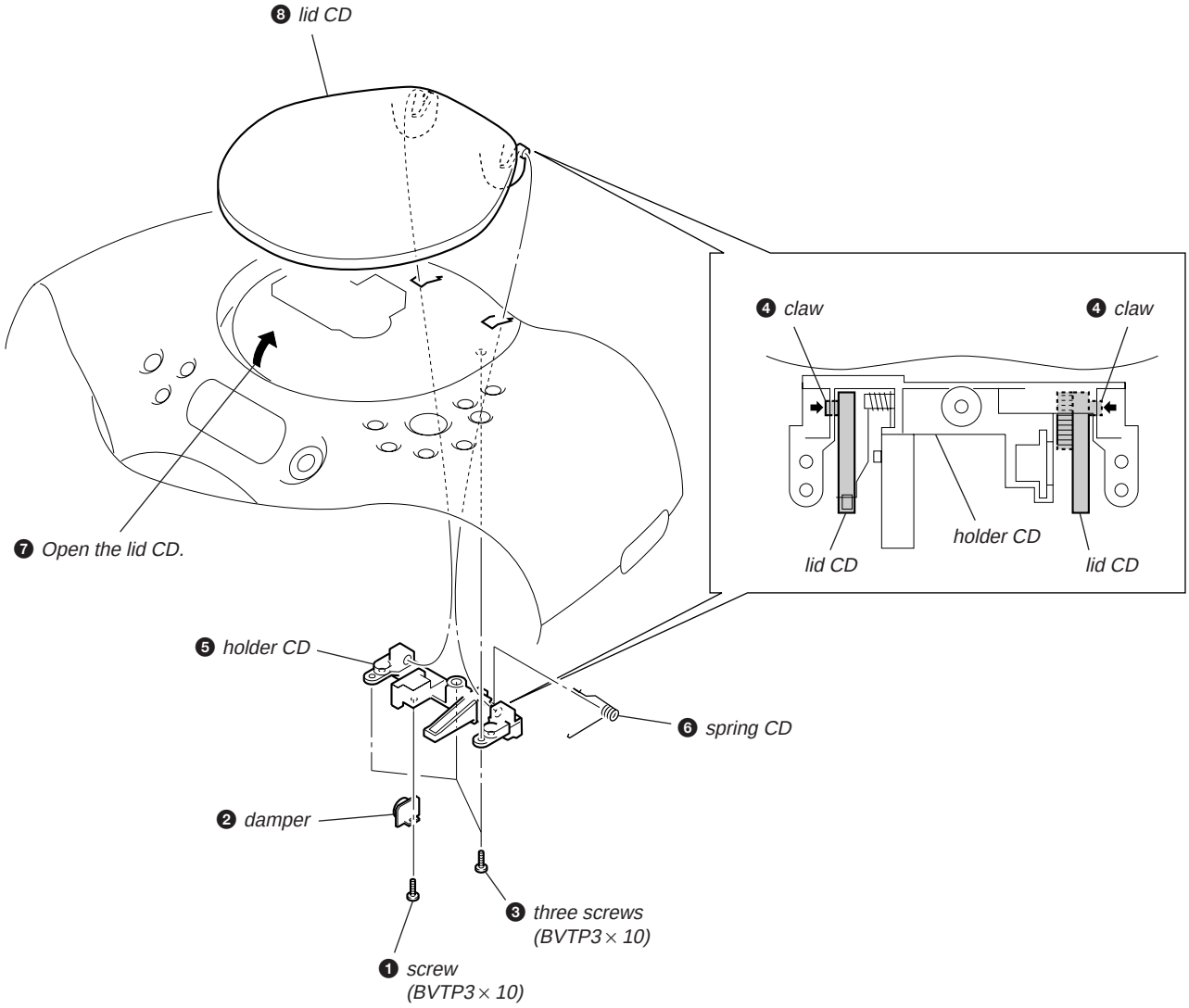
3-10. CABINET FRONT SECTION



3-11. SPEAKER (10cm) (L) (SP1), SPEAKER (10cm) (R) (SP2)



3-12. LID CD


❽ lid CD
❹ claw
❹ claw
holder CD
lid CD
lid CD
❼ Open the lid CD.
❺ holder CD
❻ spring CD
❷ damper
❸ three screws
(BVTP3 × 10)
❶ screw
(BVTP3 × 10)

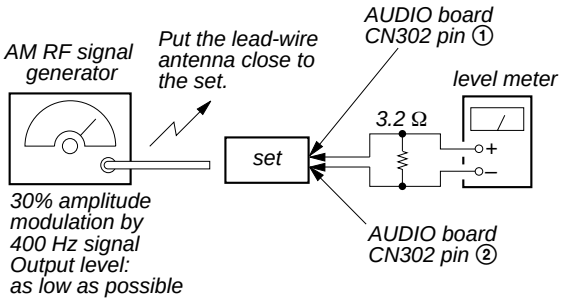
SECTION 4
ELECTRICAL ADJUSTMENTS

PRECAUTION

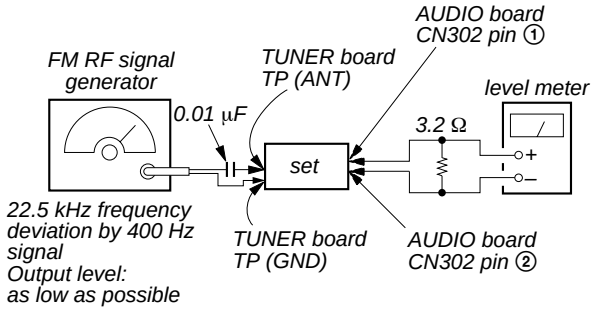
1. Setting
   MEGA BASS control : OFF

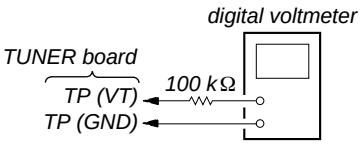
TUNER SECTION | 0 dB=1 μV

[AM (MW/LW)]
Setting:
Function: RADIO
BAND/AUTO PRESET button: AM (US,Canadian)
MW or LW
(Except US,Canadian)


AM RF signal generator
Put the lead-wire antenna close to the set.
AUDIO board CN302 pin ①
level meter
3.2 Ω
set
30% amplitude modulation by 400 Hz signal
Output level:
as low as possible
AUDIO board CN302 pin ②

[FM]
Setting:
Function: RADIO
BAND/AUTO PRESET button: FM





- Repeat the procedures in each adjustment several times, and the tracking adjustments should be finally done by the trimmer capacitors.
- Remove FM antenna in FM adjustment.

AM (MW/LW) IF ADJUSTMENT	
Adjust for a maximum reading on level meter	
T1	450 kHz

AM VCO VOLTAGE ADJUSTMENT (US, Canadian)		
Adjustment Part	Frequency Display	Reading on Digital Voltmeter
L4	530 kHz	1.0 ± 0.05 V
Confirmation	1,710 kHz	5.3 ± 0.7 V

AM TRACKING ADJUSTMENT (US, Canadian)	
Adjust for a maximum reading on level meter	
L3	620 kHz
CT3	1,400 kHz

MW VCO VOLTAGE ADJUSTMENT (Except US, Canadian)		
Adjustment Part	Frequency Display	Reading on Digital Voltmeter
L4	531 kHz	1.0 ± 0.1 V
Confirmation	1,629 kHz	5.3 ± 0.7 V

MW TRACKING ADJUSTMENT (Except US, Canadian)	
Adjust for a maximum reading on level meter	
L3-1	621 kHz
CT3	1,404 kHz

LW TRACKING ADJUSTMENT (Except US, Canadian)	
Adjust for a maximum reading on level meter	
L3-2	162 kHz
CT5	261 kHz

FM IF ADJUSTMENT	
Adjust for a minimum reading on level meter	
T2	10.7 MHz

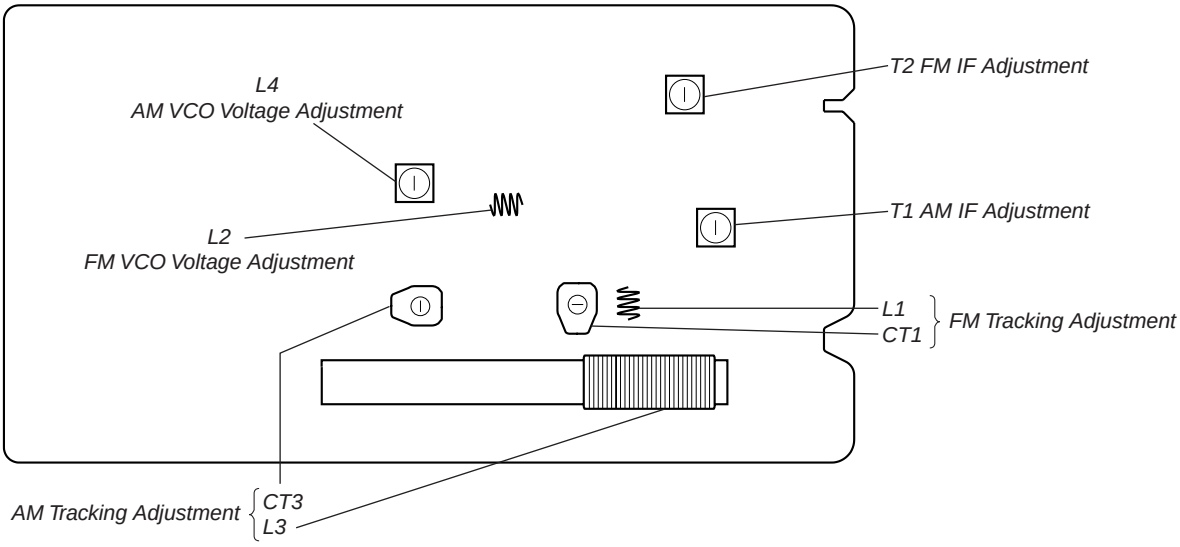
FM VCO VOLTAGE ADJUSTMENT		
Adjustment Part	Frequency Display	Reading on Digital Voltmeter
L2	108 MHz	3.0 ± 0.2 V
Confirmation	87.5 MHz	1.3 ± 0.3 V

FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter	
L1	87.5 MHz
CT1	108 MHz

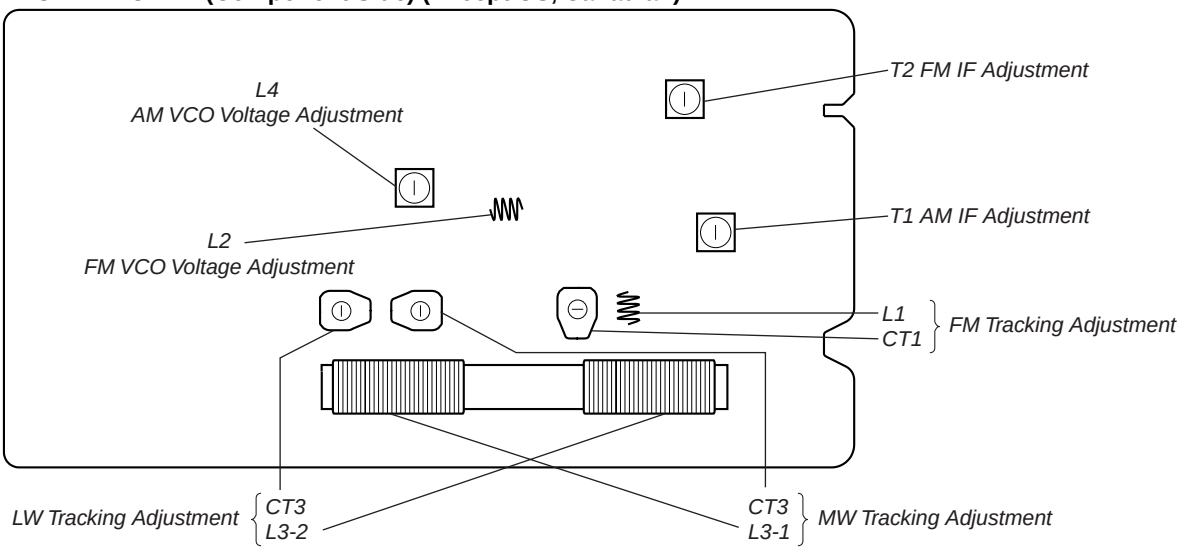
Adjustment Location: TUNER and AUDIO boards
(See page 16, 17)

Adjustment Location:

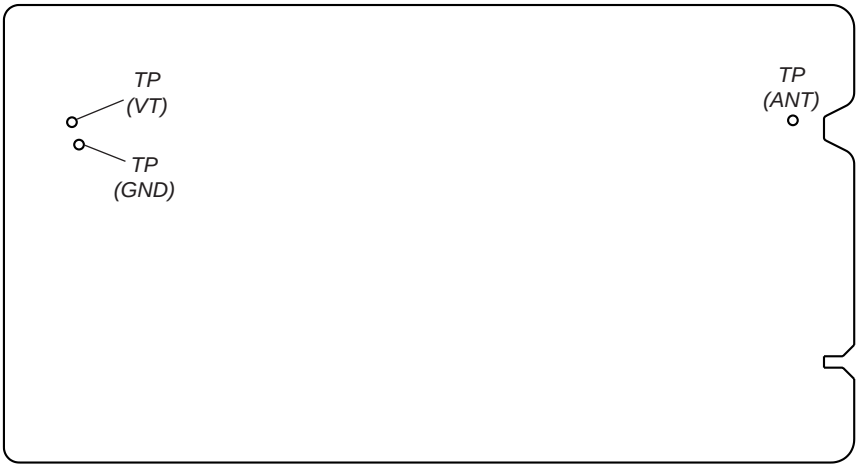
– TUNER BOARD (Component Side) (US, Canadian) –



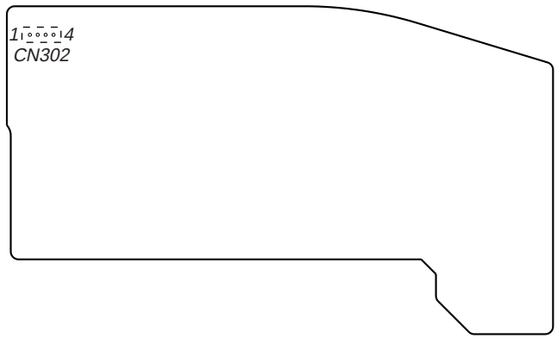
– TUNER BOARD (Component Side) (Except US, Canadian) –



– TUNER BOARD (Conductor Side) –



– AUDIO BOARD (Conductor Side) –



CD SECTION

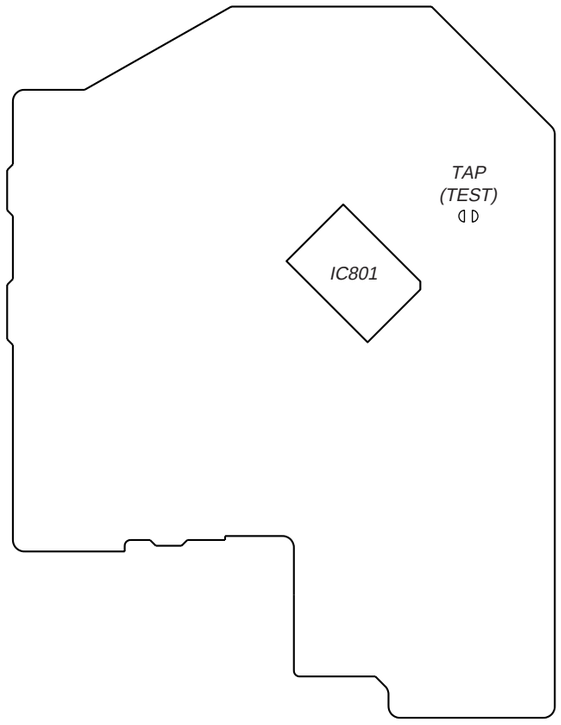
Perform all CD section check in the test mode.

HOW TO THE SET INTO CD TEST MODE

1. Press the [POWER] button to turn the power on.
2. Press the [■] button.
3. Set test mode by momentarily shorting both of TAP (TEST) on the CONTROL board.
4. Press the [■] button to enter the CD test mode.
5. To release the CD test mode, press the [POWER] button to turn the power off.

Checking Location:

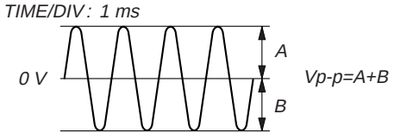
– CONTROL BOARD (Conductor Side) –



TRAVERSE CHECK

1. Connect an oscilloscope to TP (TE) and TP (VC) on the CDMP3 board.
2. Insert the disc (YEDS-18). (Part No.: 3-702-101-01) (CD)
3. Press the [▶II] button three times.
4. Confirm that the center of the oscilloscope waveform is at 0 V.
5. Confirm that the oscilloscope waveform Vp-p value is at 0.8 ± 0.2 V.
6. Insert the disc (TCD-W082L). (Part No.: J-2502-063-2) (CD-RW)
7. Perform confirmation in the same manner as step 4 and 5.

VOLT/DIV: 0.2 V (with the 10:1 probe in use)
TIME/DIV : 1 ms

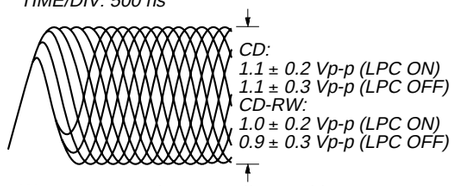


FOCUS BIAS CHECK

1. Connect the oscilloscope to TP (RF) and TP (VC) on the CDMP3 board.
2. Insert the disc (YEDS-18). (Part No. : 3-702-101-01) (CD)
3. Press the [▶II] button three times. (LPC ON)
4. Confirm that the oscilloscope waveform is as shown in the figure below. (eye pattern)
   A good eye pattern means that the diamond shape (◊) in the center of the waveform can be clearly distinguished.
5. Press the [▶II] button three times. (LPC OFF)
6. Perform confirmation in the same manner as step 4.
7. Insert the disc (TCD-W082L). (Part No.: J-2502-063-2) (CD-RW)
8. Perform confirmation in the same manner as step 4 to 6.

• RF signal reference waveform (eye pattern)

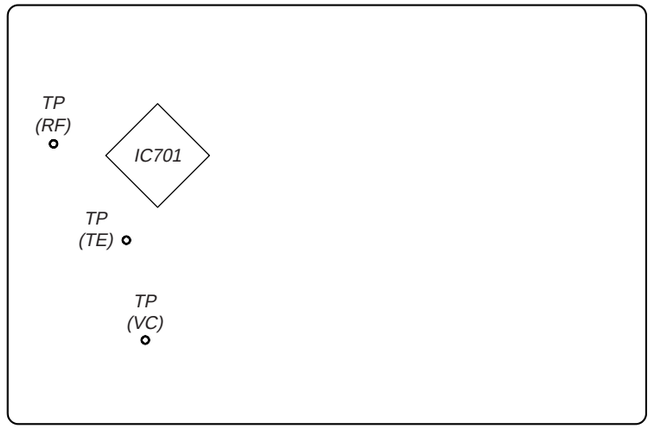
VOLT/DIV: 0.2 V (with the 10: 1 probe in use.)
TIME/DIV: 500 ns



When observing the eye pattern, set the oscilloscope for AC range and raise vertical sensitivity.

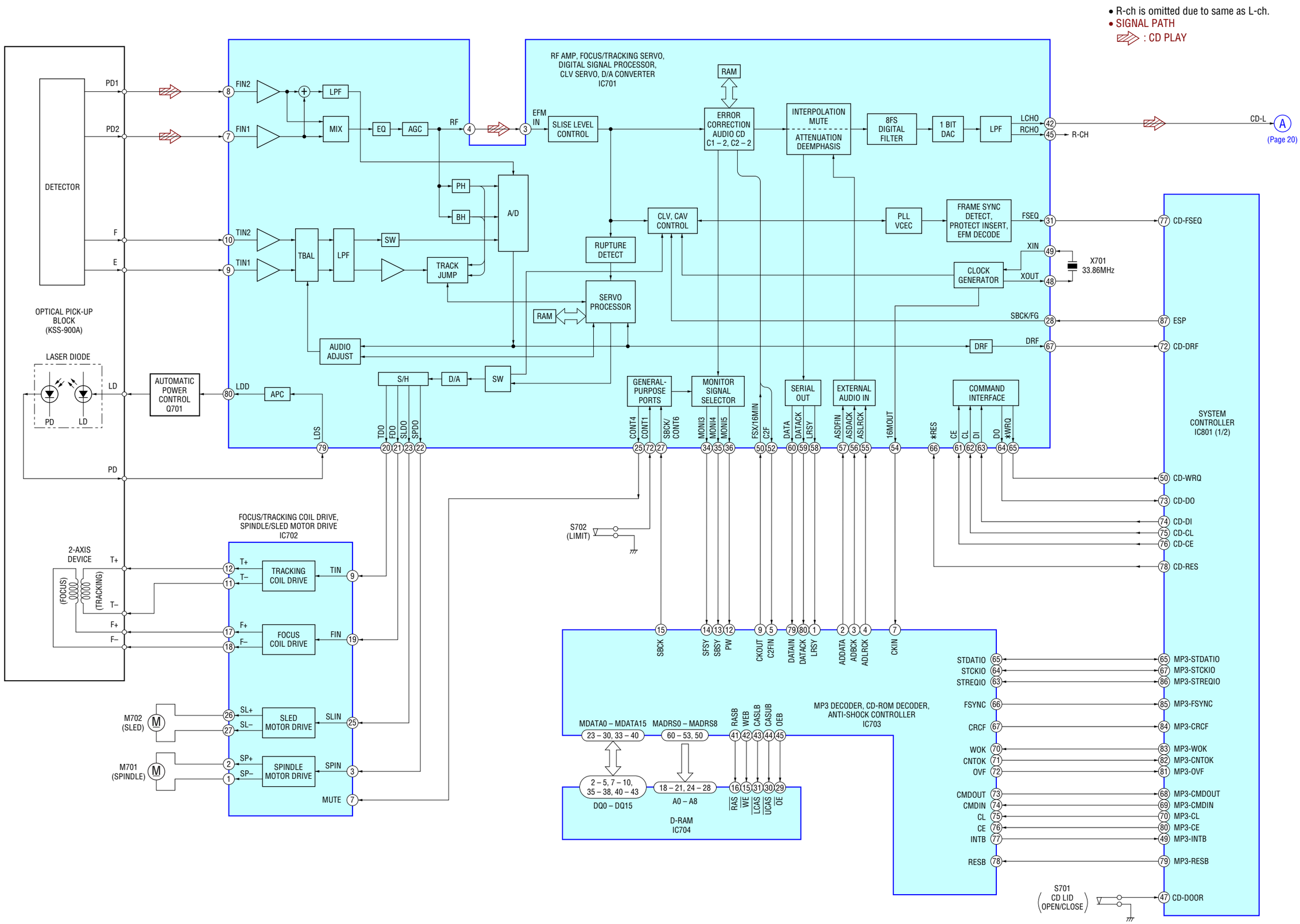
Checking Location:

– CDMP3 BOARD (Conductor Side) –

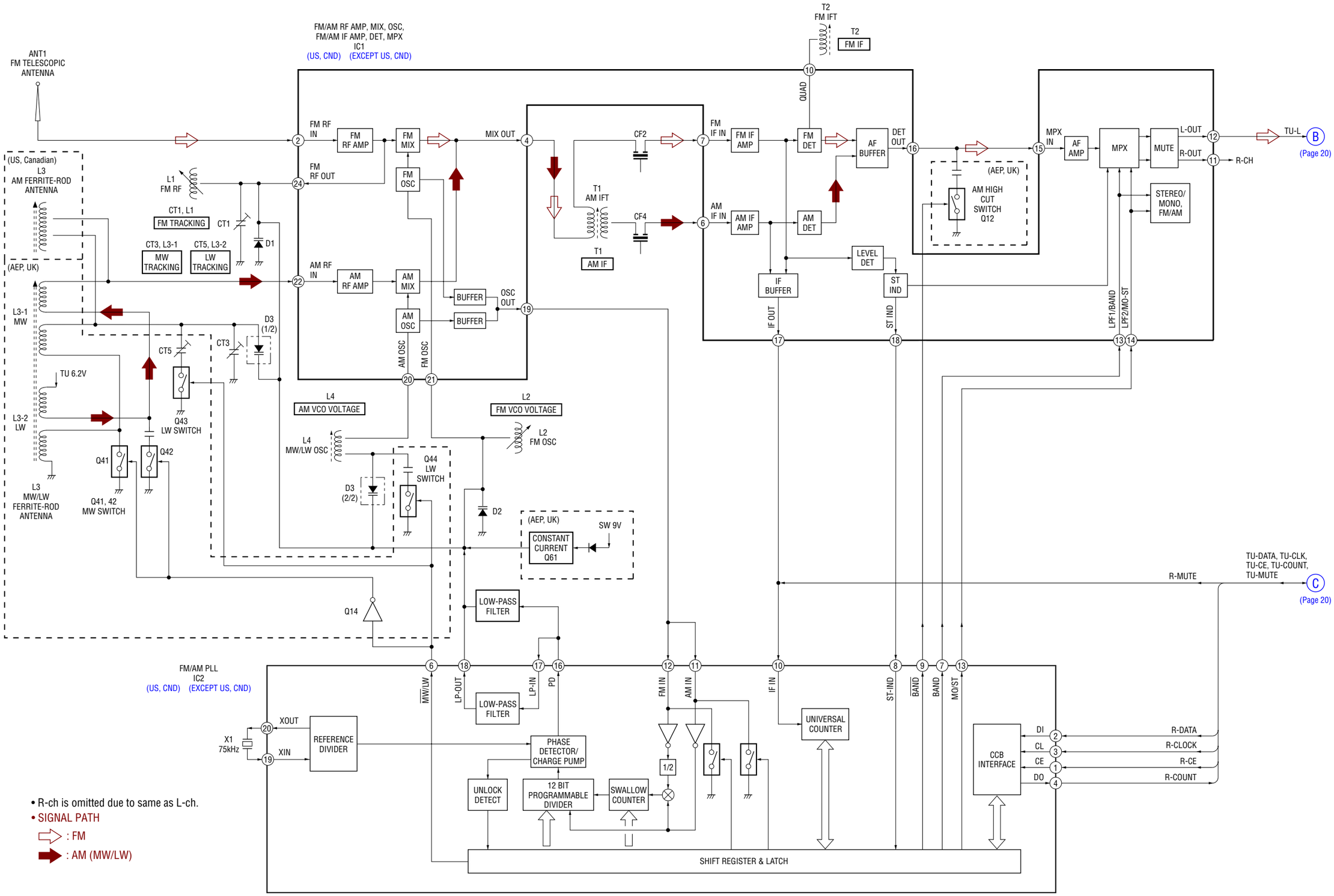


SECTION 5
DIAGRAMS

5-1. BLOCK DIAGRAM – CD Section –

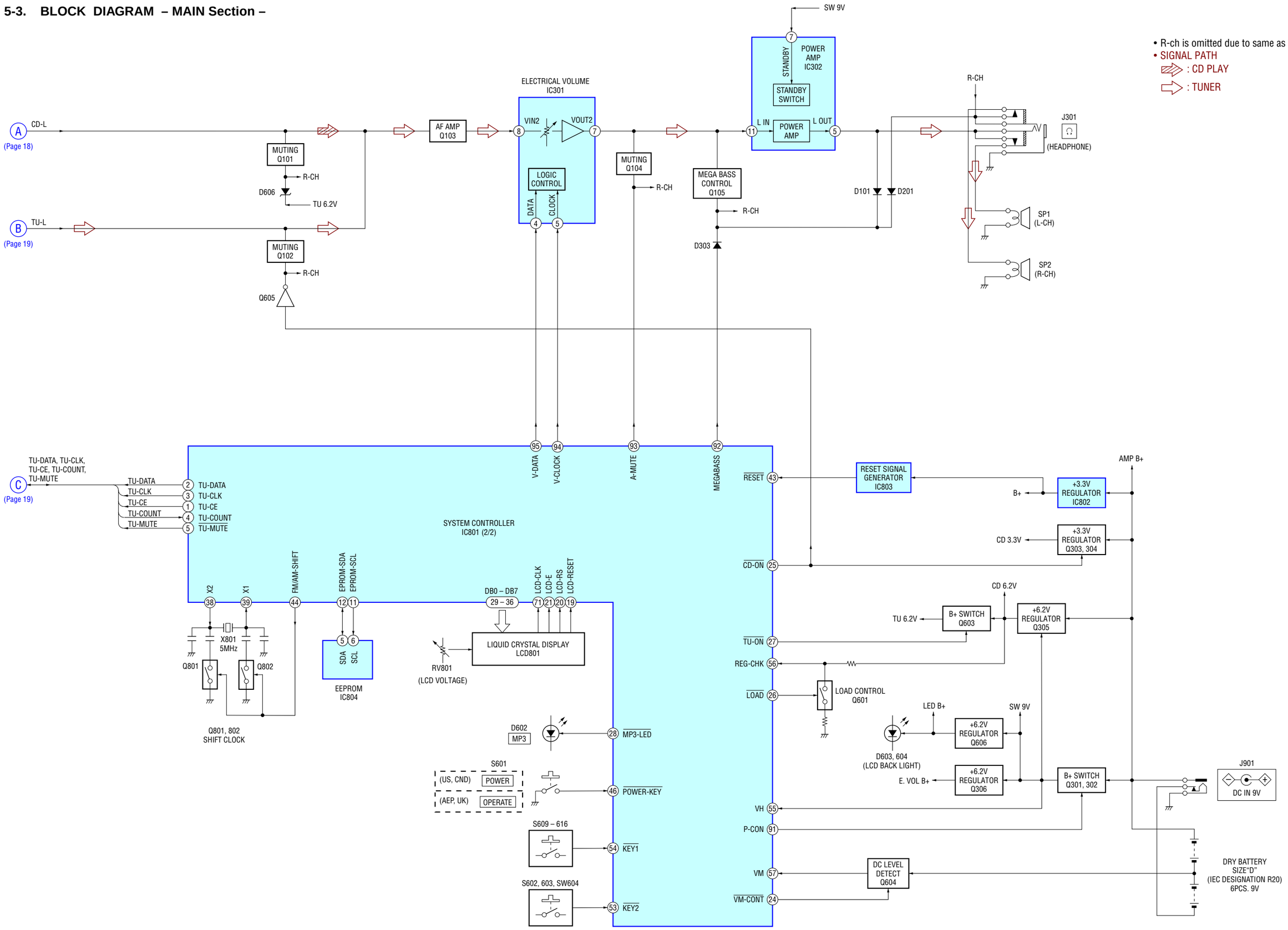


5-2. BLOCK DIAGRAM – TUNER Section –



5-3. BLOCK DIAGRAM – MAIN Section –

- R-ch is omitted due to same as L-ch.
- SIGNAL PATH
  - : CD PLAY
  - : TUNER



5-4. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note on Printed Wiring Boards:

- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- ⊡← : indicates side identified with part number.
- △ : internal component.
- ▬ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

Caution:	
Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.

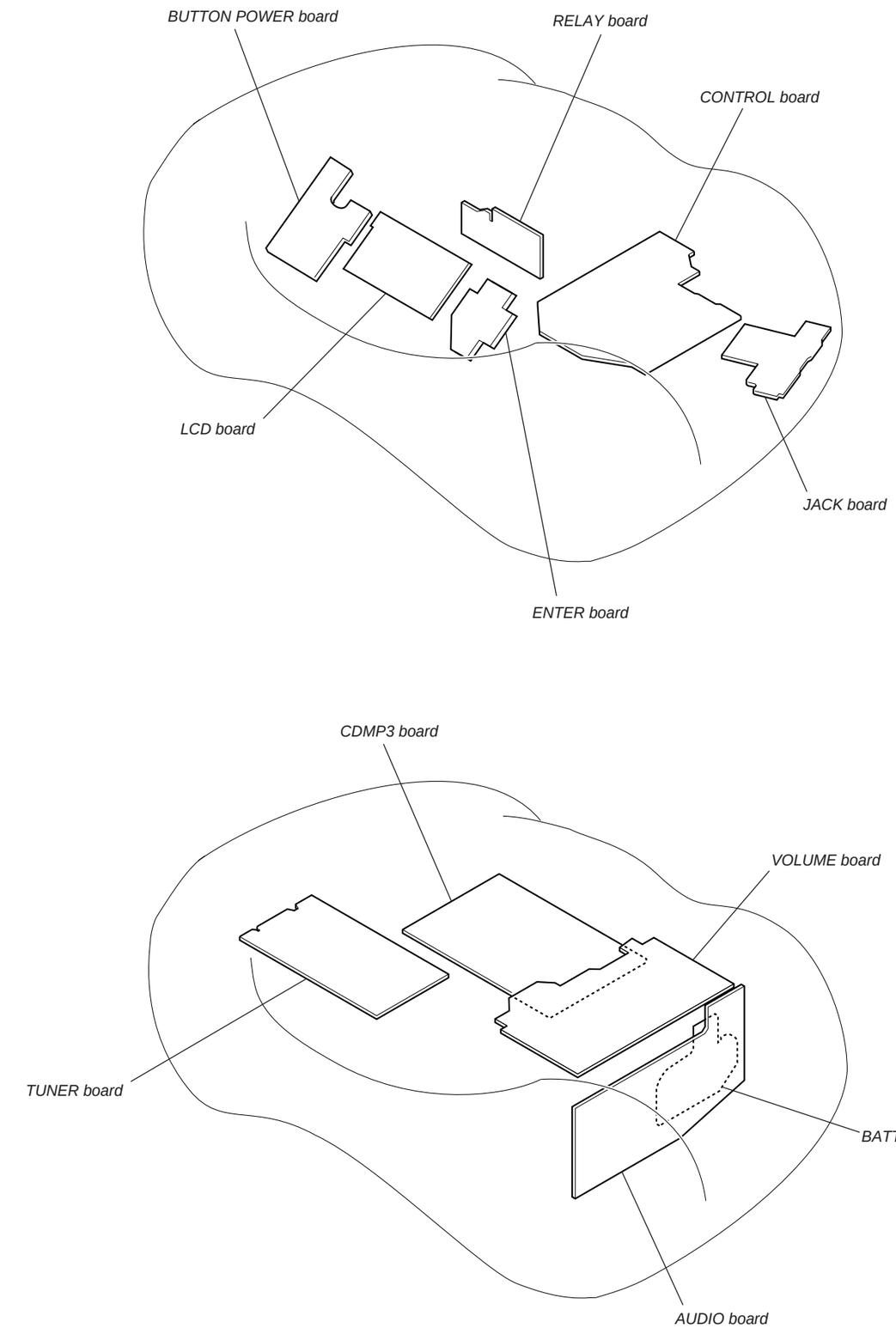
Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- ▬ : B+ Line.
- ▬ ▬ : B– Line.
- ▭ : adjustment for repair.
- Power voltage is dc 4.5V and fed with regulated dc power supply from pin ① and ③ of CN901 on the BATTERY board, and from pin ② and ③ as well.
  no mark : FM
  ( ) : AM (MW)
  ⟨⟨ ⟩⟩ : LW
  [ ] : CD PLAY
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM
  ➡ : AM (MW/LW)
  ⇨ : CD
- Abbreviation
  CND : Canadian model
  EE : East European model
  IT : Italian model

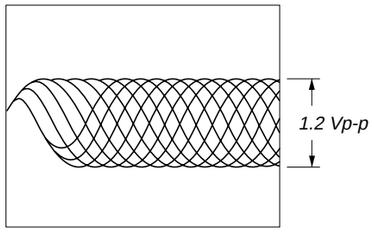
- **Circuit Boards Location**



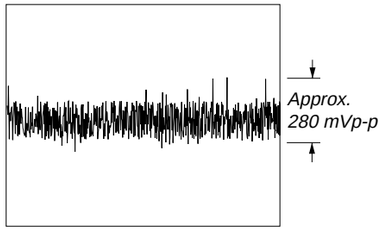
• **Waveforms**

– CDMP3 Board –

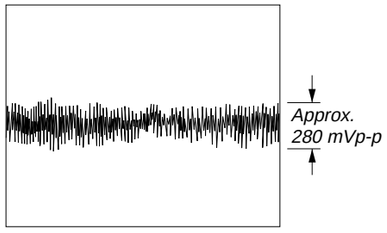
⓫ IC701 ④ (RF) (CD Play mode)
500 mV/DIV, 1 µs/DIV



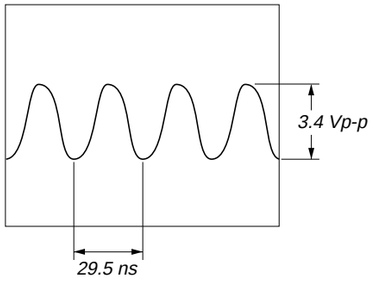
⓬ IC701 ⑬ (FE) (CD Play mode)
500 mV/DIV, 1 µs/DIV



⓭ IC701 ⑮ (TE) (CD Play mode)
500 mV/DIV, 1 µs/DIV

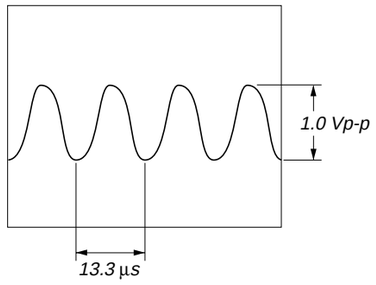


⓮ IC701 ㊽ (XOUT)
1 V/DIV, 10 ns/DIV



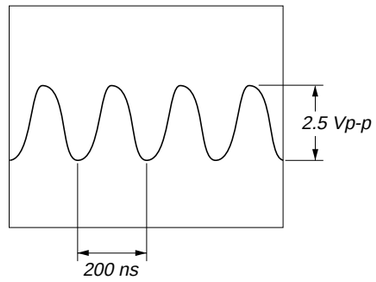
– TUNER Board –

❶ IC2 ⑳ (XOUT)
500 mV/DIV, 5 µs/DIV



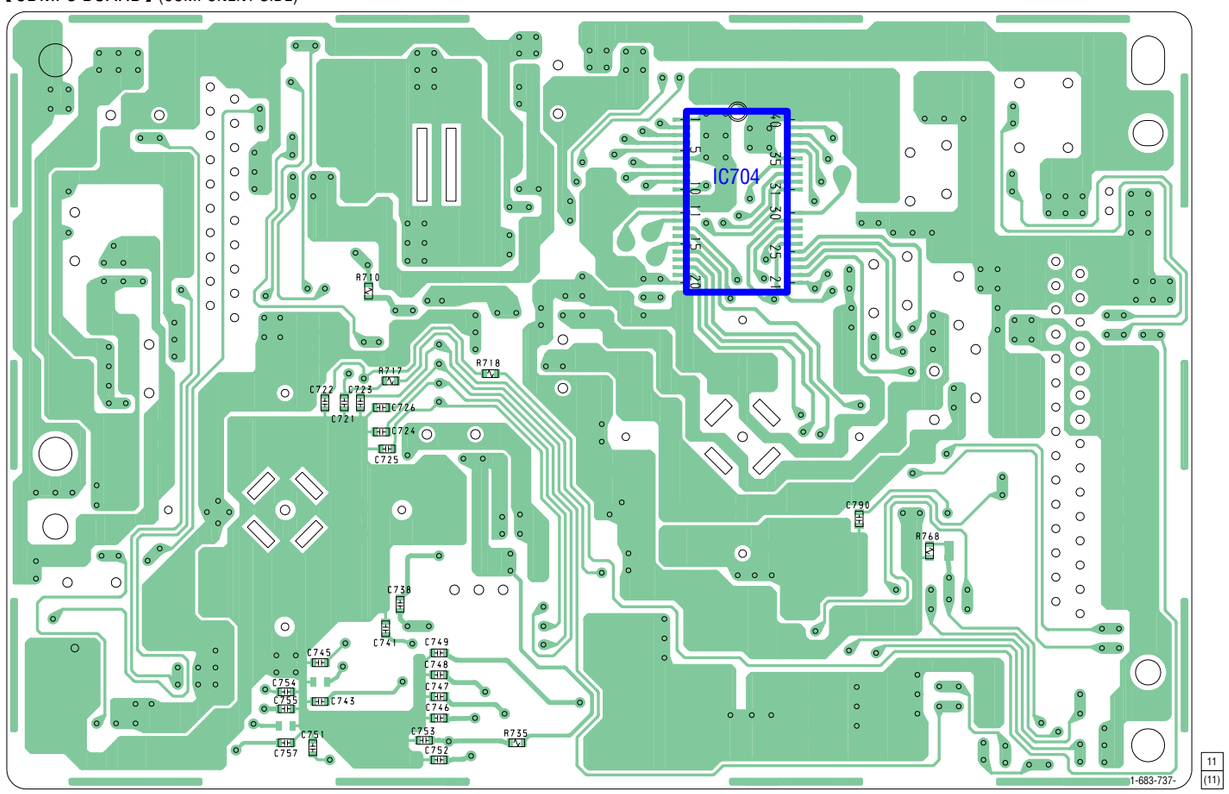
– CONTROL Board –

㉑ IC801 ㊴ (X1)
1 V/DIV, 100 ns/DIV

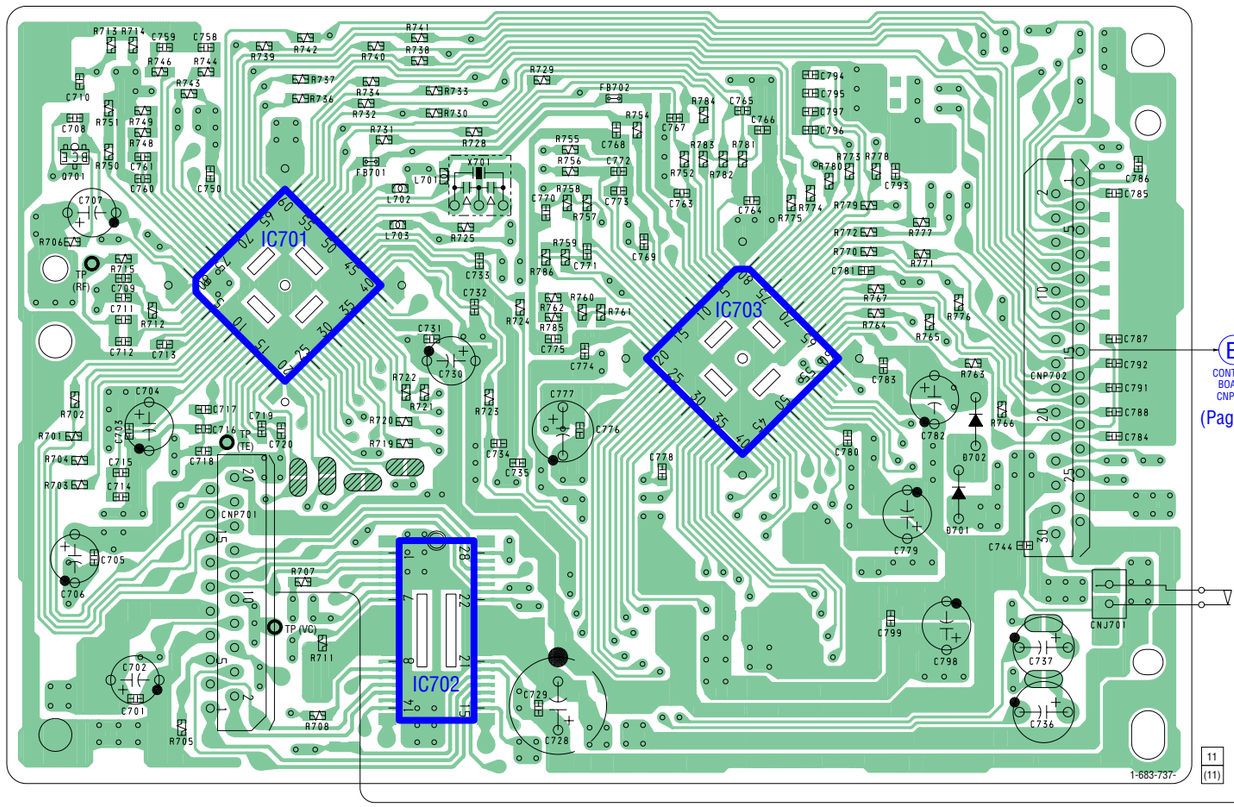


5-5. PRINTED WIRING BOARDS – CD Section – • See page 21 for Circuit Boards Location.

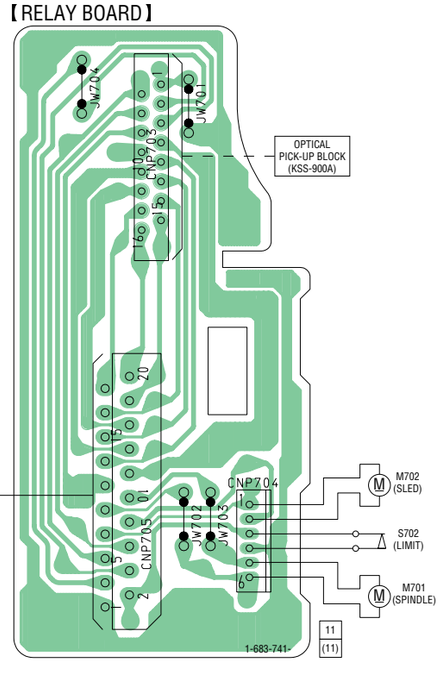
【CDMP3 BOARD】(COMPONENT SIDE)



【CDMP3 BOARD】(CONDUCTOR SIDE)



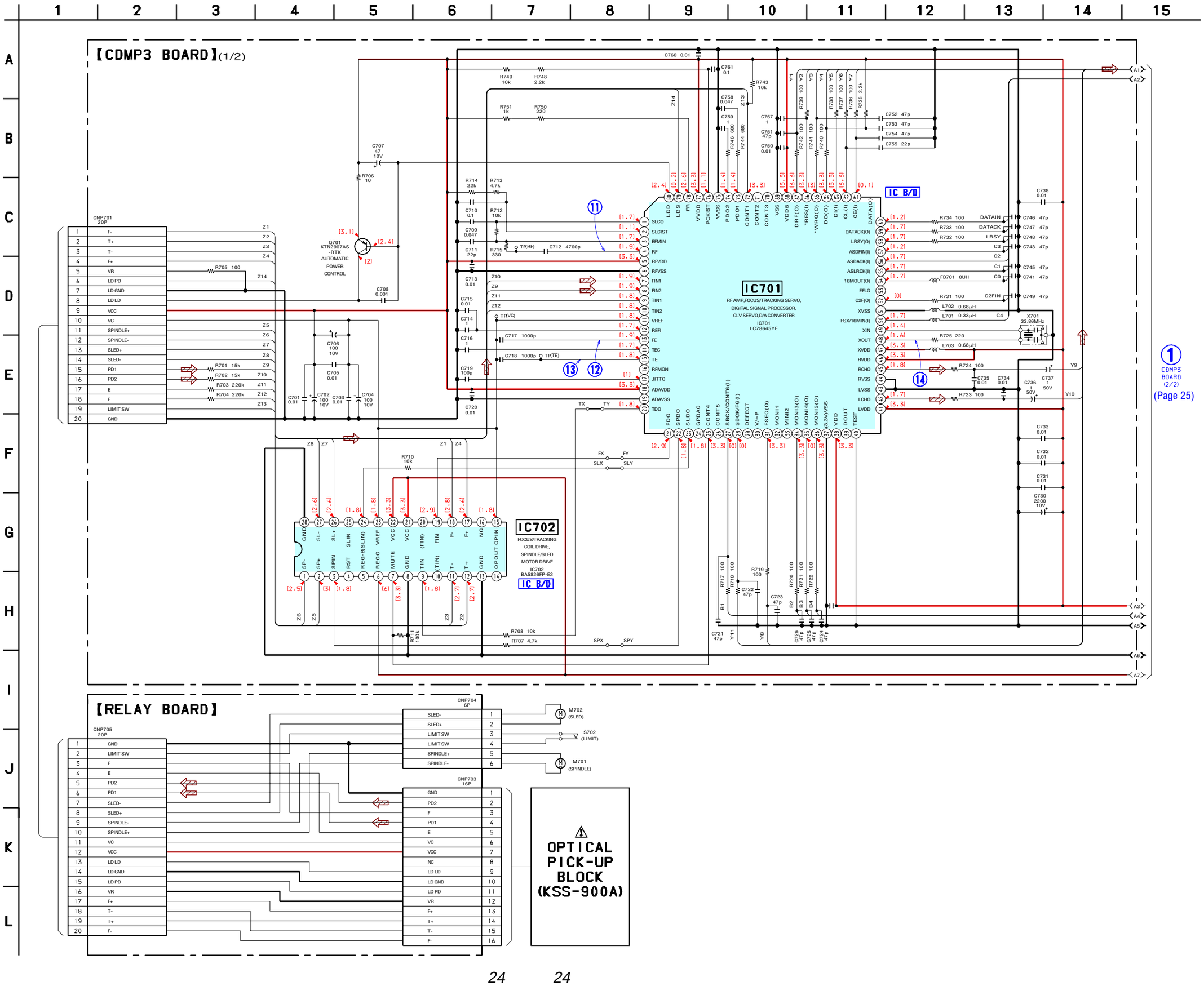
【RELAY BOARD】



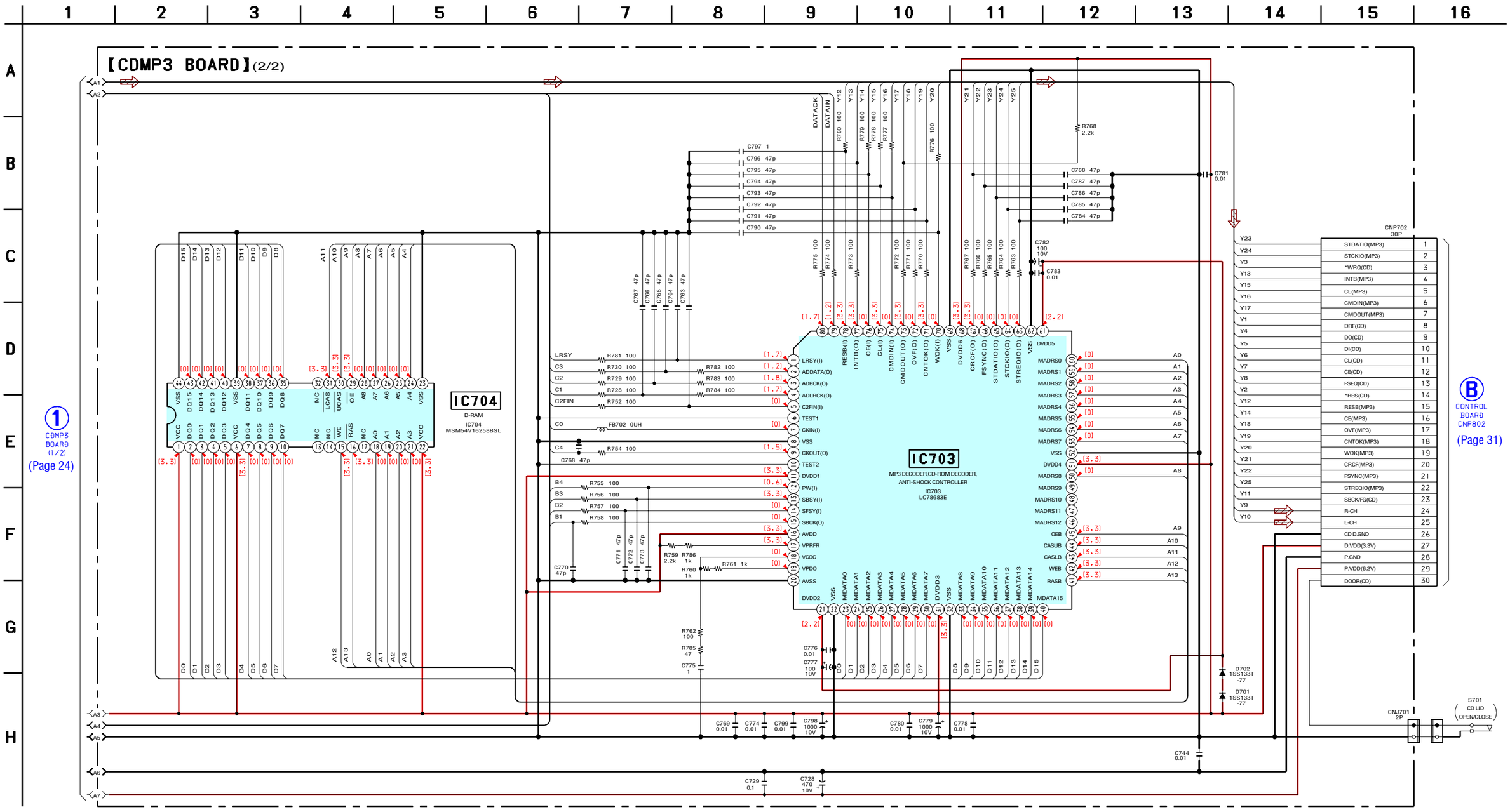
- **Semiconductor Location**

Ref. No.	Location
D701	L-9
D702	K-9
IC701	J-3
IC702	M-4
IC703	J-7
IC704	B-7
Q701	I-1

5-6. SCHEMATIC DIAGRAM – CD Section (1/2) – • See page 22 for Waveforms. • See page 34 for IC Block Diagrams.



5-7. SCHEMATIC DIAGRAM – CD Section (2/2) –

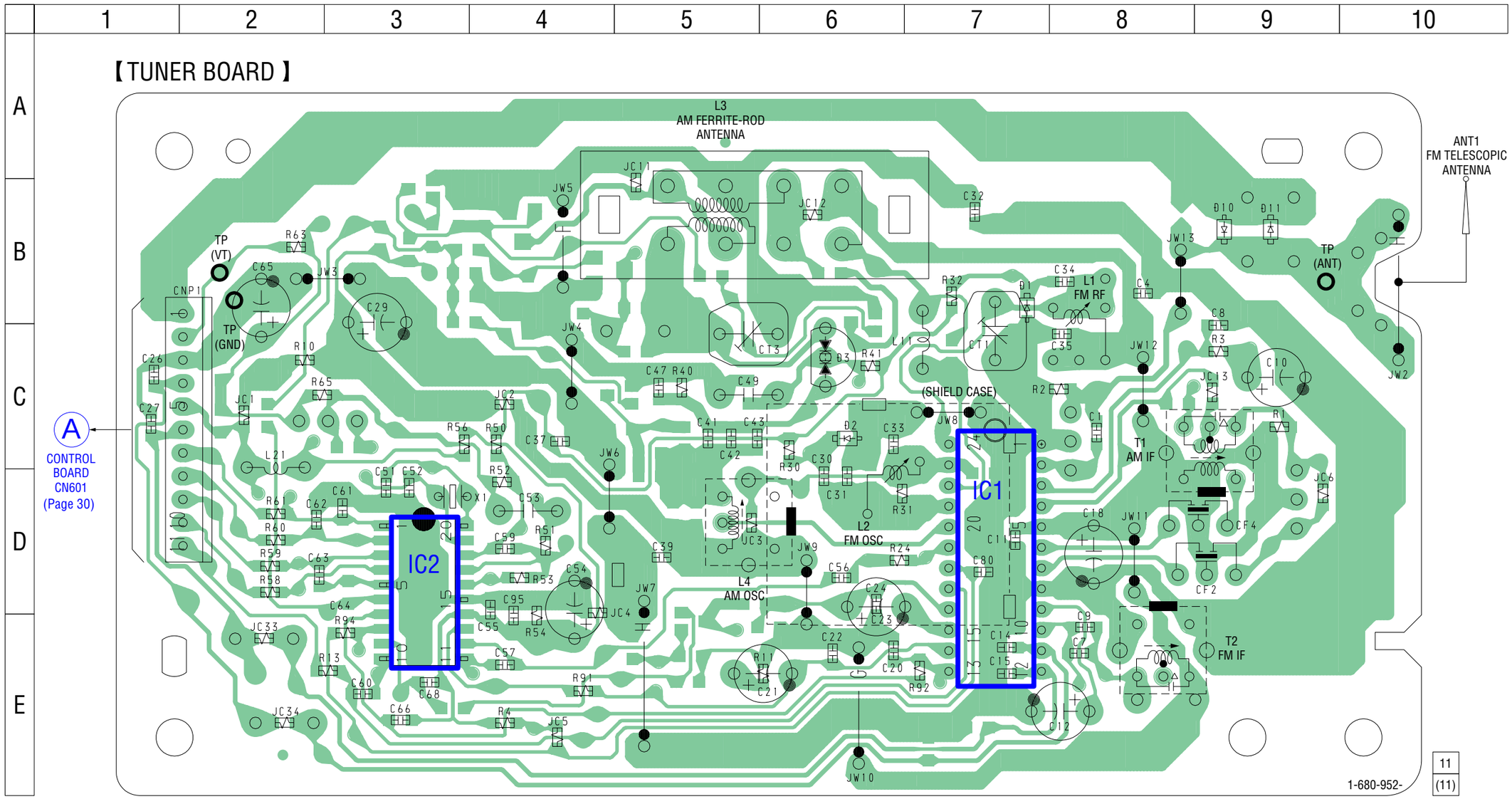


5-8. PRINTED WIRING BOARD – TUNER Section (US, Canadian Models) –

• See page 21 for Circuit Boards Location.

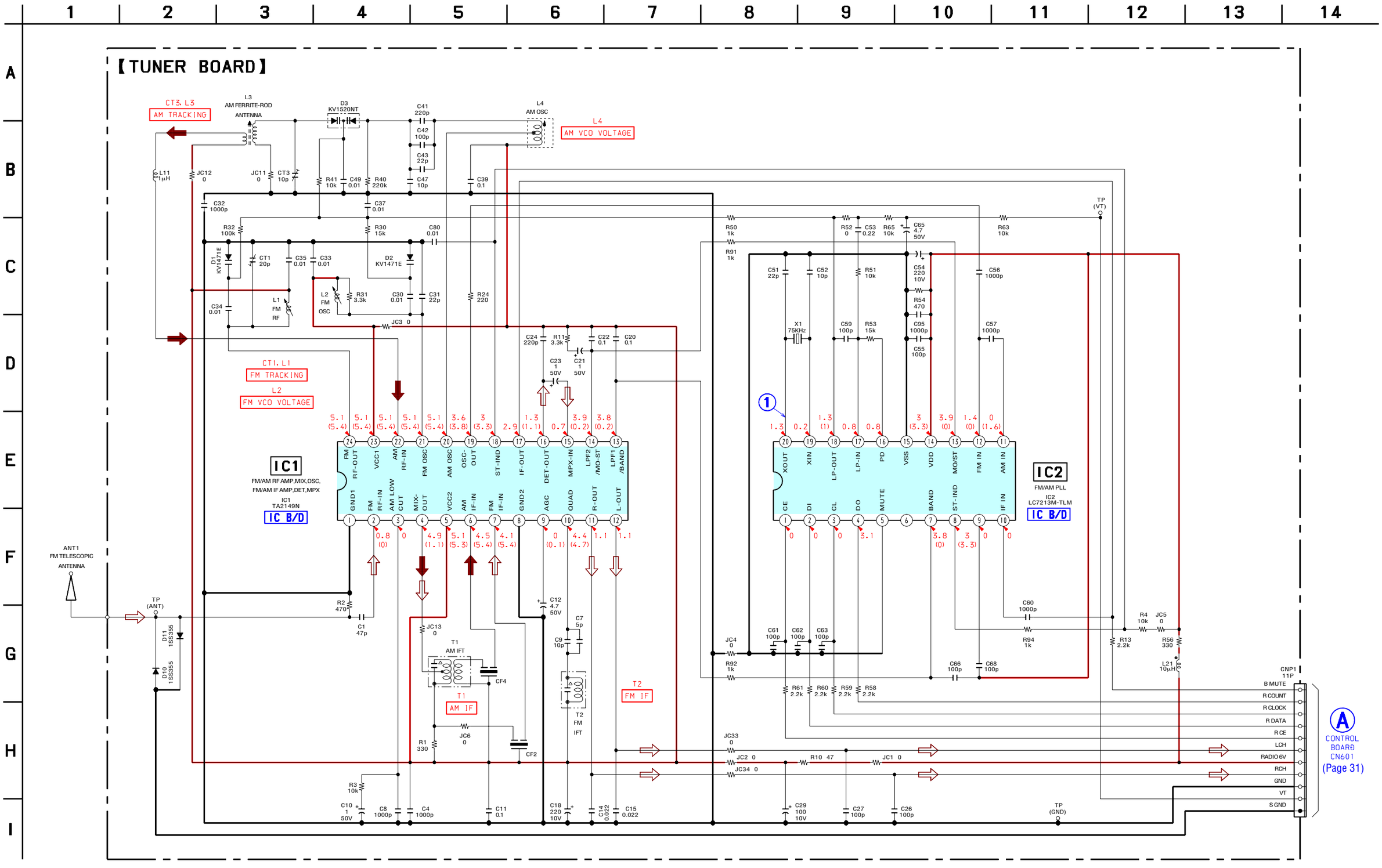
- **Semiconductor Location**

Ref. No.	Location
D1	B-7
D2	C-6
D3	C-6
D10	B-9
D11	B-9
IC1	D-7
IC2	D-3



5-9. SCHEMATIC DIAGRAM – TUNER Section (US, Canadian Models) – • See page 22 for Waveform. • See page 34 for IC Block Diagrams.

【TUNER BOARD】

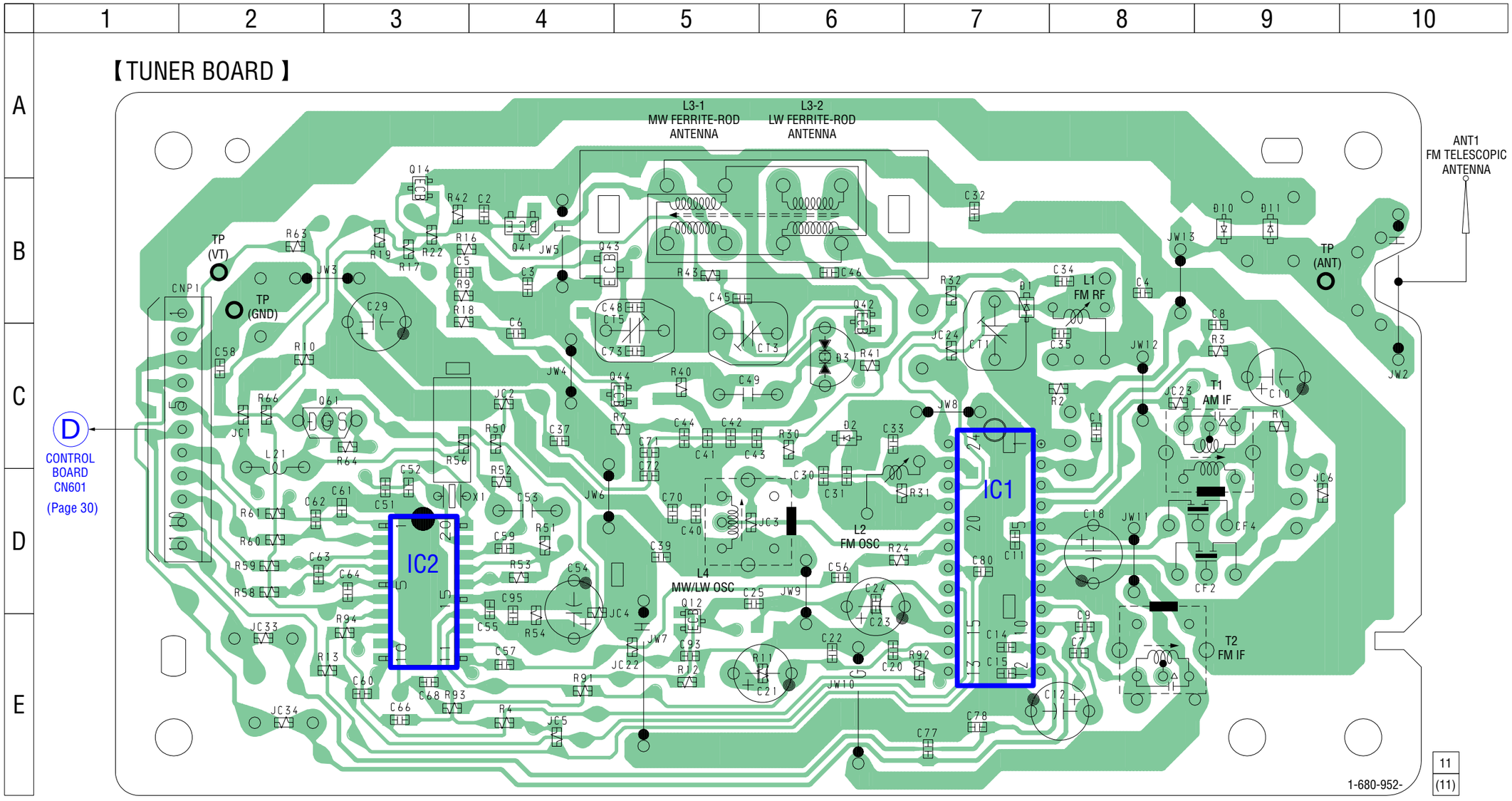


5-10. PRINTED WIRING BOARD – TUNER Section (Except US, Canadian models) –

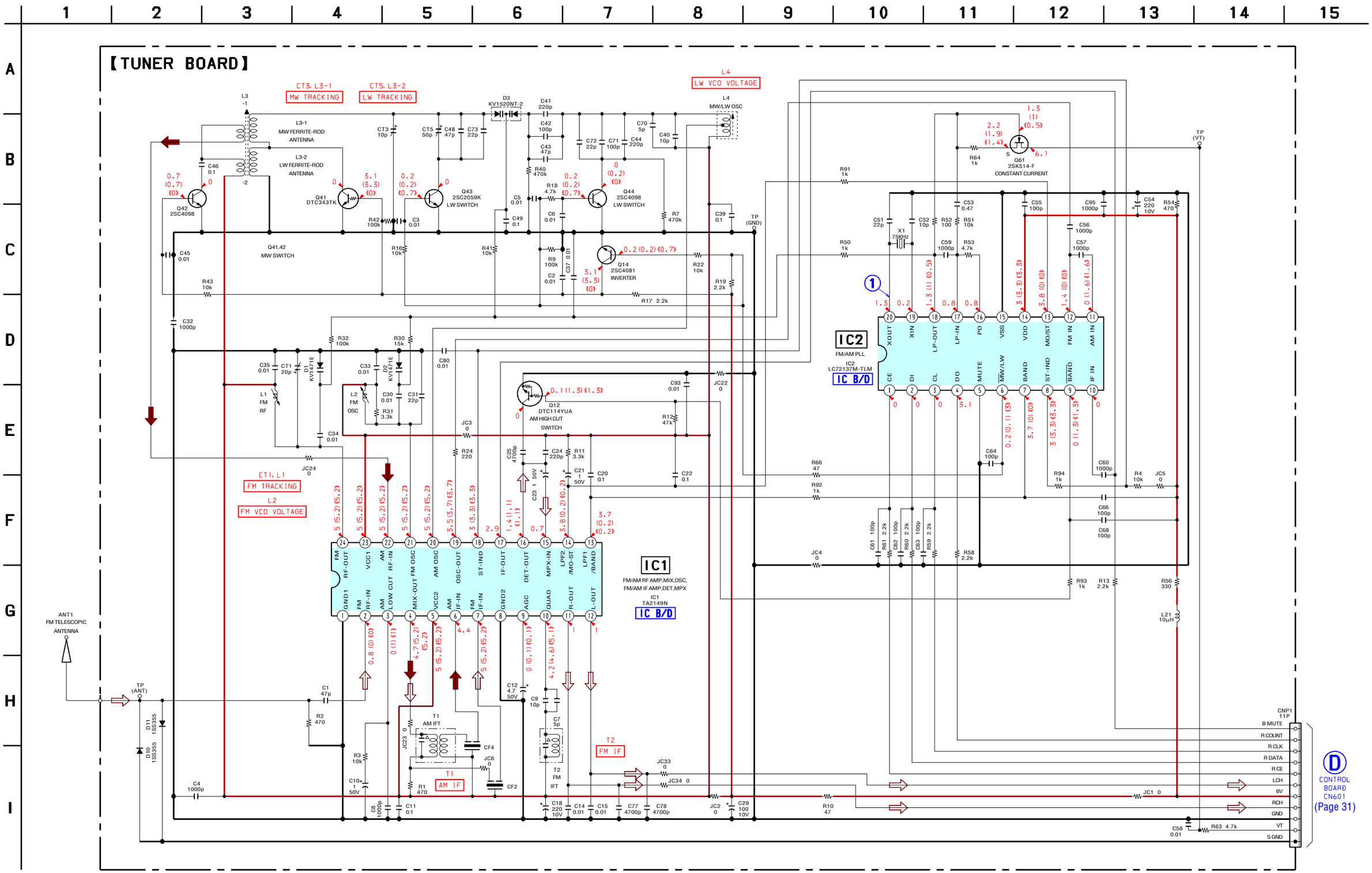
• See page 21 for Circuit Boards Location.

- **Semiconductor Location**

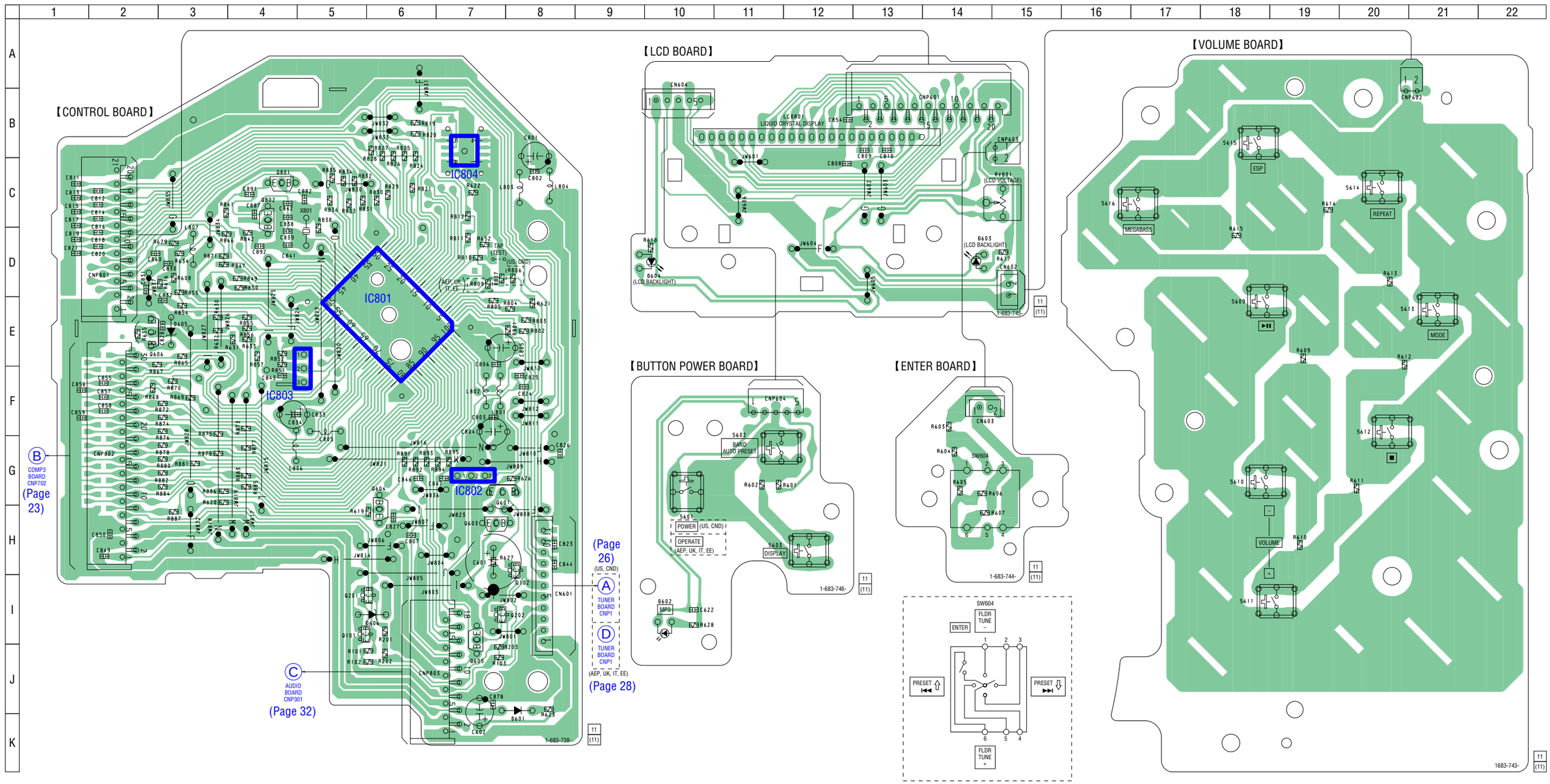
Ref. No.	Location
D1	B-7
D2	C-6
D3	C-6
D10	B-9
D11	B-9
IC1	D-7
IC2	D-3
Q12	E-5
Q14	B-3
Q41	B-4
Q42	B-6
Q43	B-4
Q44	C-5
Q61	C-3



5-11. SCHEMATIC DIAGRAM – TUNER Section (Except US, Canadian Models) – • See page 22 for Waveform. • See page 34 for IC Block Diagrams.



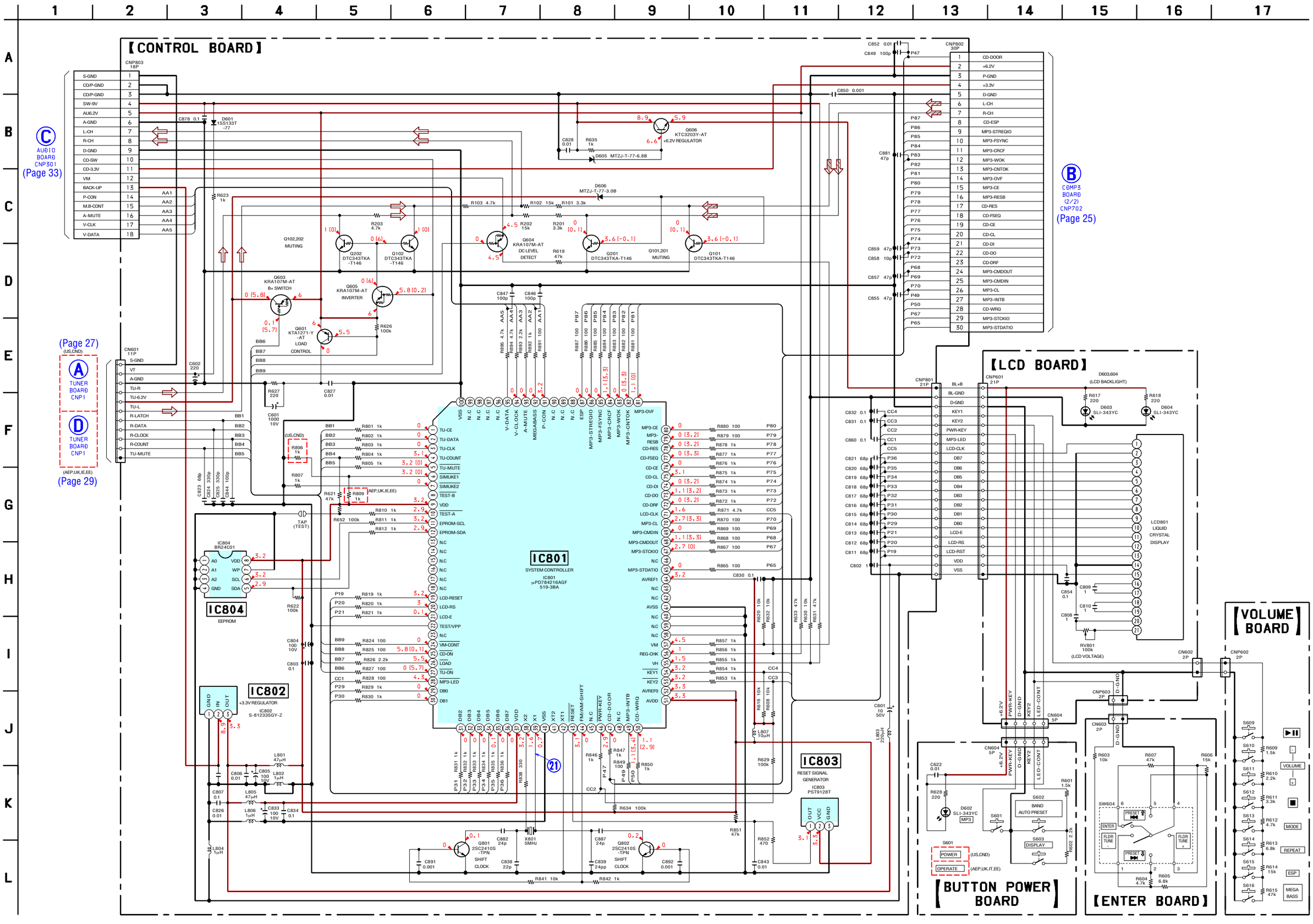
5-12. PRINTED WIRING BOARDS – CONTROL Section – • See page 21 for Circuit Boards Location.



- **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D601	J-8	Q101	I-5
D602	I-10	Q102	H-8
D603	D-14	Q201	I-6
D604	D-10	Q202	I-7
D605	E-3	Q601	G-7
D606	I-6	Q603	H-7
		Q604	H-6
IC801	E-6	Q605	I-7
IC802	G-7	Q606	E-2
IC803	F-5	Q801	C-4
IC804	B-7	Q802	C-4

5-13. SCHEMATIC DIAGRAM – CONTROL Section – • See page 22 for Waveform.

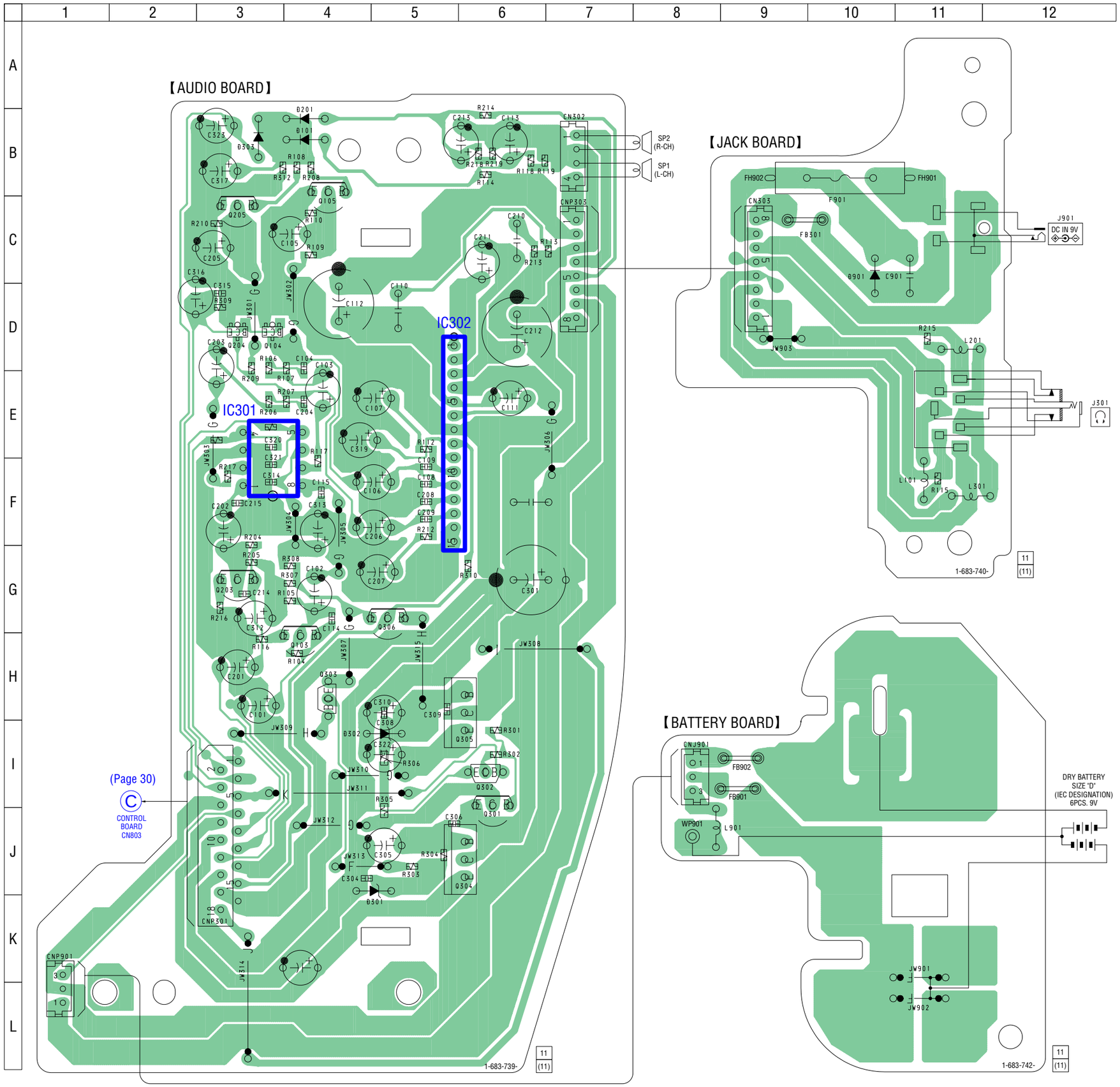


5-14. PRINTED WIRING BOARDS –AUDIO/POWER Section – •

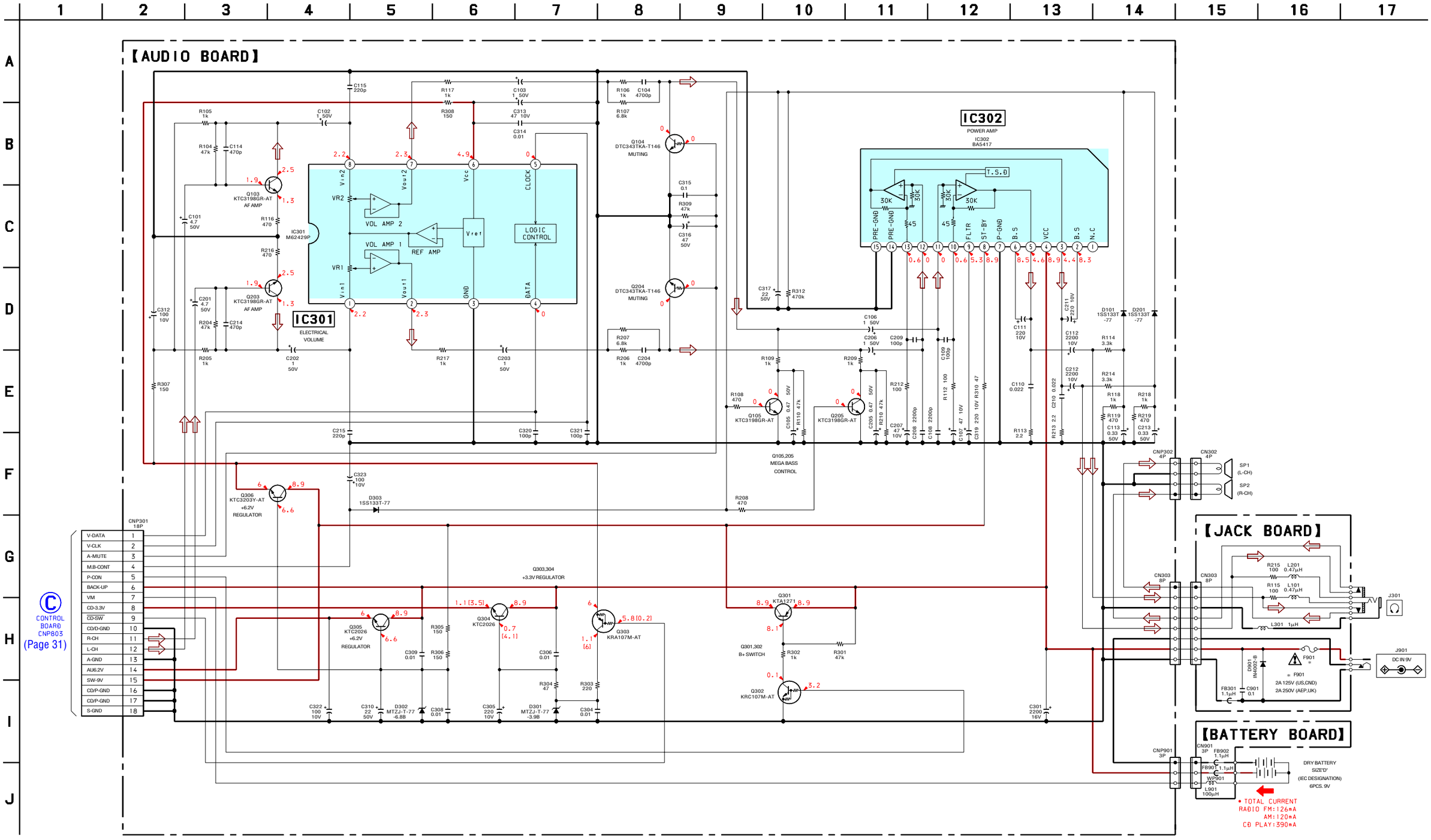
See page 21 for Circuit Boards Location.

• **Semiconductor Location**

Ref. No.	Location
D101	B-4
D201	B-4
D301	J-5
D302	I-5
D303	B-3
D901	C-10
IC301	E-3
IC302	E-5
Q103	H-4
Q104	D-3
Q105	B-4
Q203	G-3
Q204	D-3
Q205	C-3
Q301	I-6
Q302	I-6
Q303	H-4
Q304	J-6
Q305	H-6
Q306	G-5



5-15. SCHEMATIC DIAGRAM –AUDIO/POWER Section –

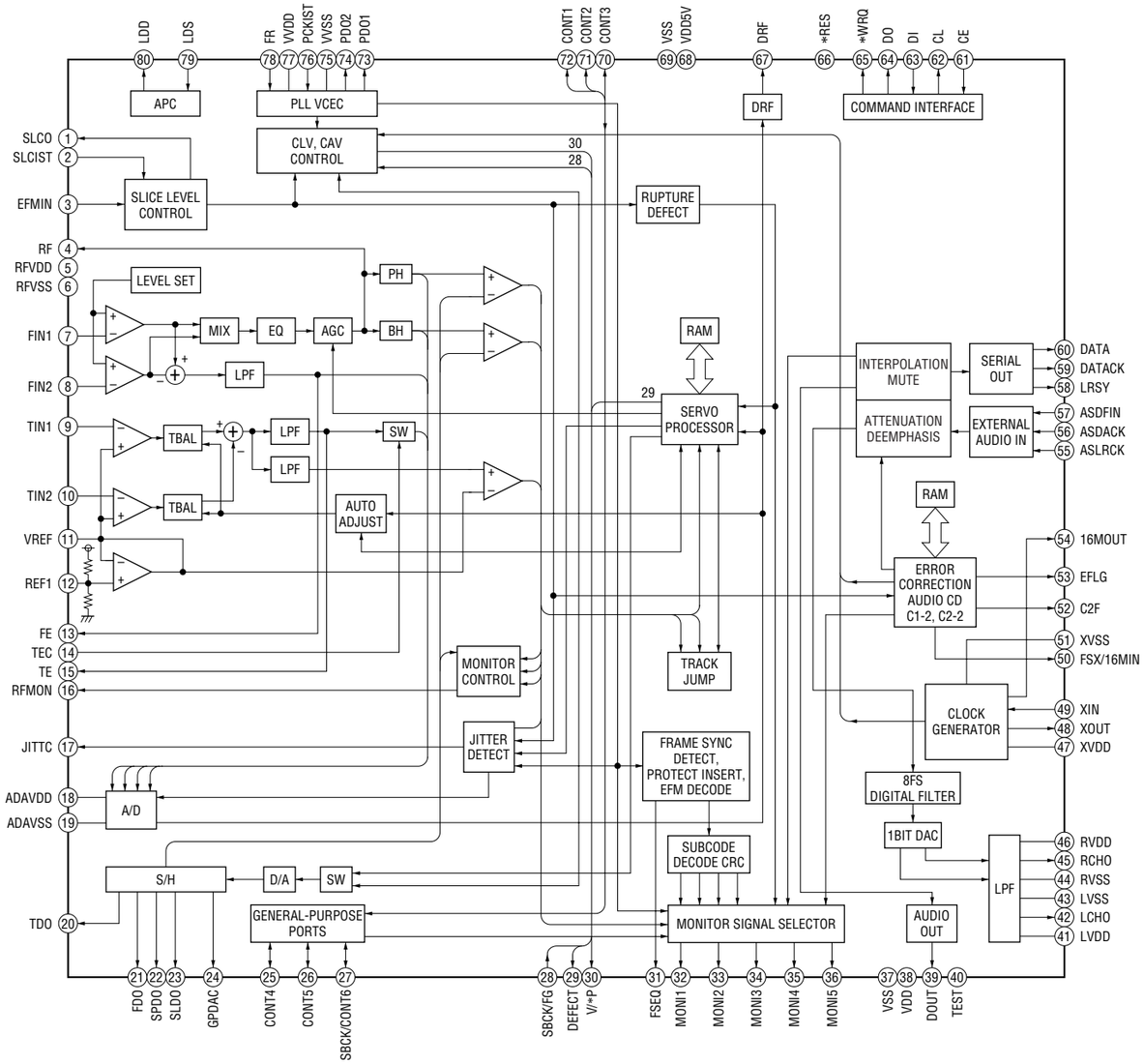


ZS-X3CP

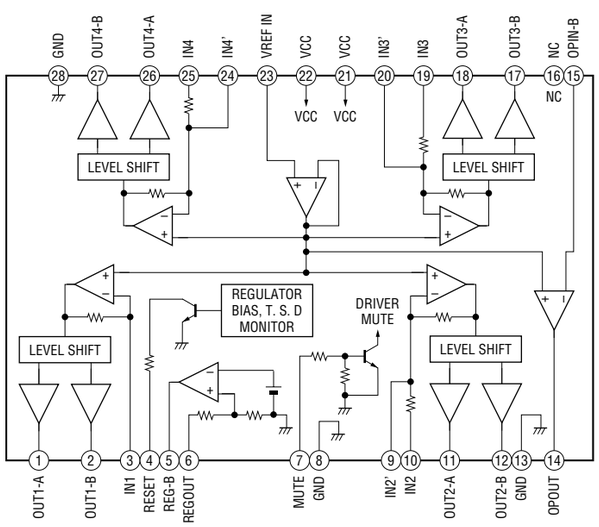
- **IC Block Diagrams**

– CDMP3 Board –

IC701 LC78645YE-US-E

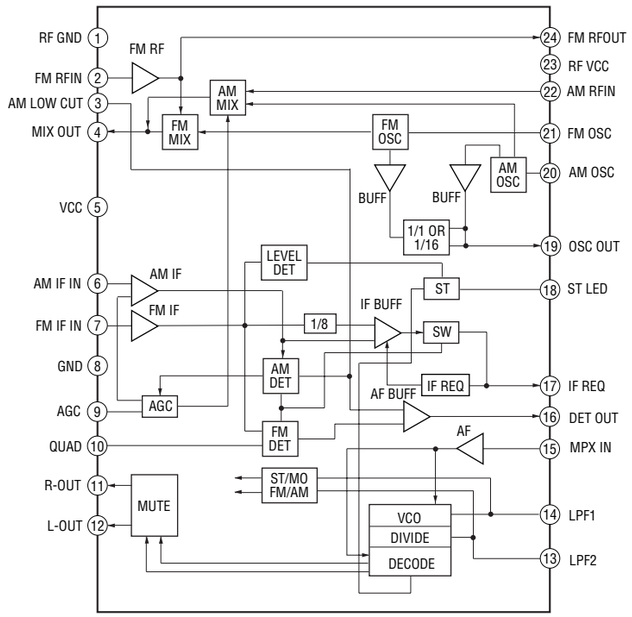


IC702 BA5826FP-E2

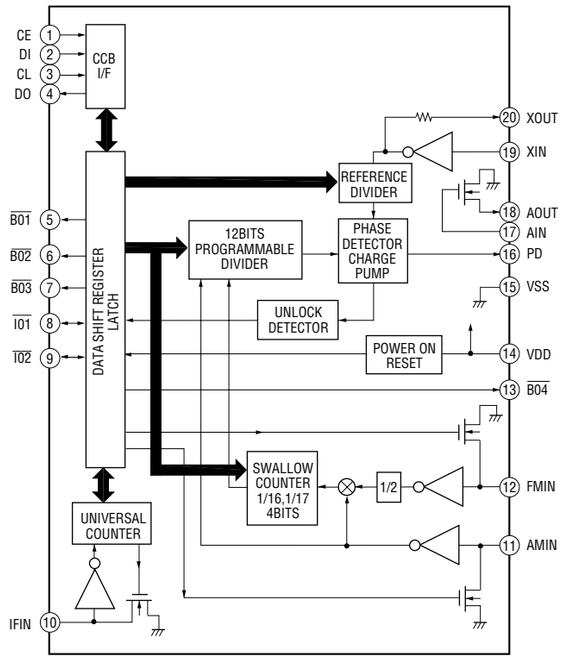


– TUNER Board –

IC1 TA2149N



IC2 LC72137M-TLM



34

5-16. IC PIN FUNCTION DESCRIPTION

• CDMP3 BOARD IC703 LC78683E-US-E (MP3 DECODER, CD-ROM DECODER, ANTI-SHOCK CONTROLLER)

Pin No.	Pin Name	I/O	Description
1	LRSY	I	CD decode L/R sampling clock signal (44.1 kHz) input
2	ADDATA	O	Audio data output
3	ADBCK	O	Audio bit clock signal (2.8224 MHz) output
4	ADLRCK	O	Audio L/R sampling clock signal (44.1 kHz) output
5	C2FIN	I	CD C2 error flag input
6	TEST1	I	Not used
7	CKIN	I	System clock signal input (16.9344 MHz) terminal
8	VSS	—	Ground terminal
9	CKOUT	O	Clock (384 Fs) signal output for the exteranak DF/DAC
10	TEST2	I	Not used
11	DVDD1	—	Power supply terminal (+3.2V) (digital system) (for I/O)
12	PW	I	CD subcode data serial input
13	SBSY	I	CD subcode block sync signal input
14	SFSY	I	CD subcode frame sync signal input
15	SBCK	O	CD subcode transfer serial clock signal output
16	AVDD	—	Power supply terminal (+3.2V) (analog system) (for PLL)
17	VPRFR	—	VCO oscillation range setting terminal
18	VCOC	I	VCO control voltage input
19	VPDO	O	VCO charge pump output
20	AVSS	—	Ground terminal (analog system)
21	DVDD2	—	Power supply terminal (+3.2V) (digital system)
22	VSS	—	Ground terminal
23 to 30	MDATA0 to MDATA7	I/O	Two-way data bus terminal for D-RAM
31	DVDD3	—	Power supply terminal (+3.2V) (digital system) (for I/O)
32	VSS	—	Ground terminal
33 to 40	MDATA8 to MDATA15	I/O	Two-way data bus terminal for D-RAM
41	RASB	O	Row address strobe signal output "L": active
42	WEB	O	Data write enable signal output "L": active
43	CASLB	O	Column address strobe signal output for lower byte "L": active
44	CASUB	O	Column address strobe signal output for upper byte "L": active
45	OEB	O	Output enable signal output "L" active
46 to 49	MADRS12 to MADRAS9	O	Address signal output terminal for D-RAM Not used
50	MADRAS8	O	Address signal output terminal for D-RAM
51	DVDD4	—	Power supply terminal (+3.2V) (digital system) (for I/O)
52	VSS	—	Ground terminal
53 to 60	MADRS7 to MADRS0	O	Address signal output terminal for D-RAM
61	DVDD5	—	Power supply terminal (+3.2V) (digital system) (for the internal logic)
62	VSS	—	Ground terminal
63	STREQIO	I/O	MP3 data request flag input/output
64	STCKIO	I/O	MP3 data transfer clock signal input/output
65	STDATIO	I/O	MP3 data input/output
66	FSYNC	O	MP3 frame synchronizing signal output

Pin No.	Pin Name	I/O	Description
67	CRCF	O	CD-ROM CRC flag output terminal
68	DVDD6	—	Power supply terminal (+3.2V) (digital system) (for I/O)
S	VSS	—	Ground terminal
70	WOK	I	MP3 data request signal input terminal
71	CNTOK	O	MP3 serial data output terminal
72	OVF	O	MP3 serial data transfer clock signal output terminal
73	CMDOUT	O	Command serial data output
74	CMDIN	I	Command serial data input
75	CL	I	Command serial data transfer clock signal input
76	CE	I	Command enable signal input “H”: active
77	INTB	O	Interrupt request signal output “L”: active
78	RESB	I	MP3 system reset signal input “L”: reset
79	DATAIN	I	CD serial data input
80	DATACK	I	CD bit clock signal input

• **CONTROL BOARD IC801 μPD784216AGF519-3BA (SYSTEM CONTROLLER)**

Pin No.	Pin Name	I/O	Description
1	TU-CE	O	PLL chip enable signal output terminal
2	TU-DATA	O	PLL serial data output terminal
3	TU-CLK	O	PLL serial data transfer clock signal output terminal
4	TU-COUNT	I	PLL serial count data input terminal
5	$\overline{\text{TU-MUTE}}$	O	Tuner muting on/off control signal output terminal "L": active
6	$\overline{\text{SIMUKE1}}$	I	Destination setting terminal
7	$\overline{\text{SIMUKE2}}$	I	Destination setting terminal
8	$\overline{\text{TEST-B}}$	O	Not used
9	VDD	—	Power supply terminal (+3.2V)
10	$\overline{\text{TEST-A}}$	I	CD automatic adjustment value check mode setting terminal Normally fixed at "H"
11	EPROM-SCL	O	Serial clock signal output terminal to the EEPROM
12	EPROM-SDA	I/O	Two-way serial data bus with the EEPROM
13 to18	N.C	O	Not used
19	LCD-RESET	O	LCD system reset signal output terminal "L": reset
20	LCD-RS	O	LCD drive signal output terminal
21	LCD-E	O	LCD drive signal output terminal
22	TEST/VPP	I	Not used
23	N.C	O	Not used
24	$\overline{\text{VM-CONT}}$	O	Middle voltage (+4.5V) detection signal output for battery check
25	$\overline{\text{CD-ON}}$	O	CD power on/off control signal output terminal "L": CD on
26	$\overline{\text{LOAD}}$	O	Load control signal output for battery level check
27	$\overline{\text{TU-ON}}$	O	Tuner power on/off control signal output terminal "L": tuner on
28	$\overline{\text{MP3-LED}}$	O	MP3 LED drive signal output terminal "L": active
29 to 36	DB0 to DB7	O	LCD drive signal output terminal
37	VDD	—	Power supply terminal (+3.2V)
38	X2	O	System clock output terminal (5MHz)
39	X1	I	System clock input terminal (5MHz)
40	VSS	—	Ground terminal
41	XT2	O	Not used
42	XT1	I	Not used
43	$\overline{\text{RESET}}$	I	System reset signal input terminal "L": reset
44	FM/AM-SHIFT	O	Shift point terminal for oscillation frequency change
45	N.C	O	Not used
46	$\overline{\text{PWR-KEY}}$	I	POWER key input terminal "L": POWER key on
47	CD-DOOR	I	CD lid open/close detection switch input terminal "L": CD lid is close
48	N.C	O	Not used
49	MP3-INTB	I	Interrupt request signal input terminal "L": active
50	CD-WRQ	I	CD interruption signal input terminal
51	AVDD	—	Ground terminal
52	AVREF0	—	Not used
53	$\overline{\text{KEY2}}$	I	Key input terminal (A/D input)
54	$\overline{\text{KEY1}}$	I	Key input terminal (A/D input)
55	VH	I	High voltage (+9V) detection signal input for battery check
56	REG-CHK	I	REG-CHK detection signal input terminal
57	VM	I	Middle voltage (+4.5V) detection input for battery check

Pin No.	Pin Name	I/O	Description
58 to 60	N.C	I	Not used
61	AVSS	—	Ground terminal
62, 63	N.C	I	Not used
64	AVREF1	—	Not used
65	MP3-STDATIO	I/O	MP3 data input/output terminal
66	N.C	O	Not used
67	MP3-STCKIO	I/O	MP3 data transfer clock signal input/output terminal
68	MP3-CMDOUT	I	Command serial data input terminal
69	MP3-CMDIN	O	Command serial data output terminal
70	MP3-CL	O	Command serial clock signal output terminal
71	LCD-CLK	O	LCD clock signal output terminal
72	CD-DRF	]	CD focus on/off detection signal input terminal
73	CD-DO	I	CD data input terminal
74	CD-DI	O	CD data output terminal
75	CD-CL	O	CD data transfer clock signal output terminal
76	CD-CE	O	CD chip enable output terminal
77	CD-FSEQ	I	CD synchronizing signal detection signal input terminal
78	CD-RES	O	CD system reset signal output terminal “L”: reset
79	MP3-RESB	O	MP3 system reset signal output “L”: reset
80	MP3-CE	O	Command serial enable signal output terminal
81	MP3-OVF	I	MP3 serial data transfer clock signal input terminal
82	MP3-CNTOK	I	MP3 serial data input terminal
83	MP3-WOK	O	MP3 data request signal output terminal
84	MP3-CRCF	I	CD-ROM CRC flag intput terminal
85	MP3-FSYNC	I	MP3 frame synchronizing signal input terminal
86	MP3-STREQIO	I/O	MP3 data request flag input/output terminal
87	ESP	O	RF control signal output for double speed playback
88 to 90	N.C	O	Not used
91	P-CON	O	Power control signal output terminal “H”: active
92	MEGABASS	O	MEGABASS on/off control signal output terminal
93	A-MUTE	O	Audio muting on/off control signal output terminal “H”: muting
94	V-CLOCK	O	Serial data transfer clock signal output to the electrical volume
95	V-DATA	O	Serial data output to the electrical volume
96 to 99	N.C	O	Not used
100	VSS	—	Ground terminal

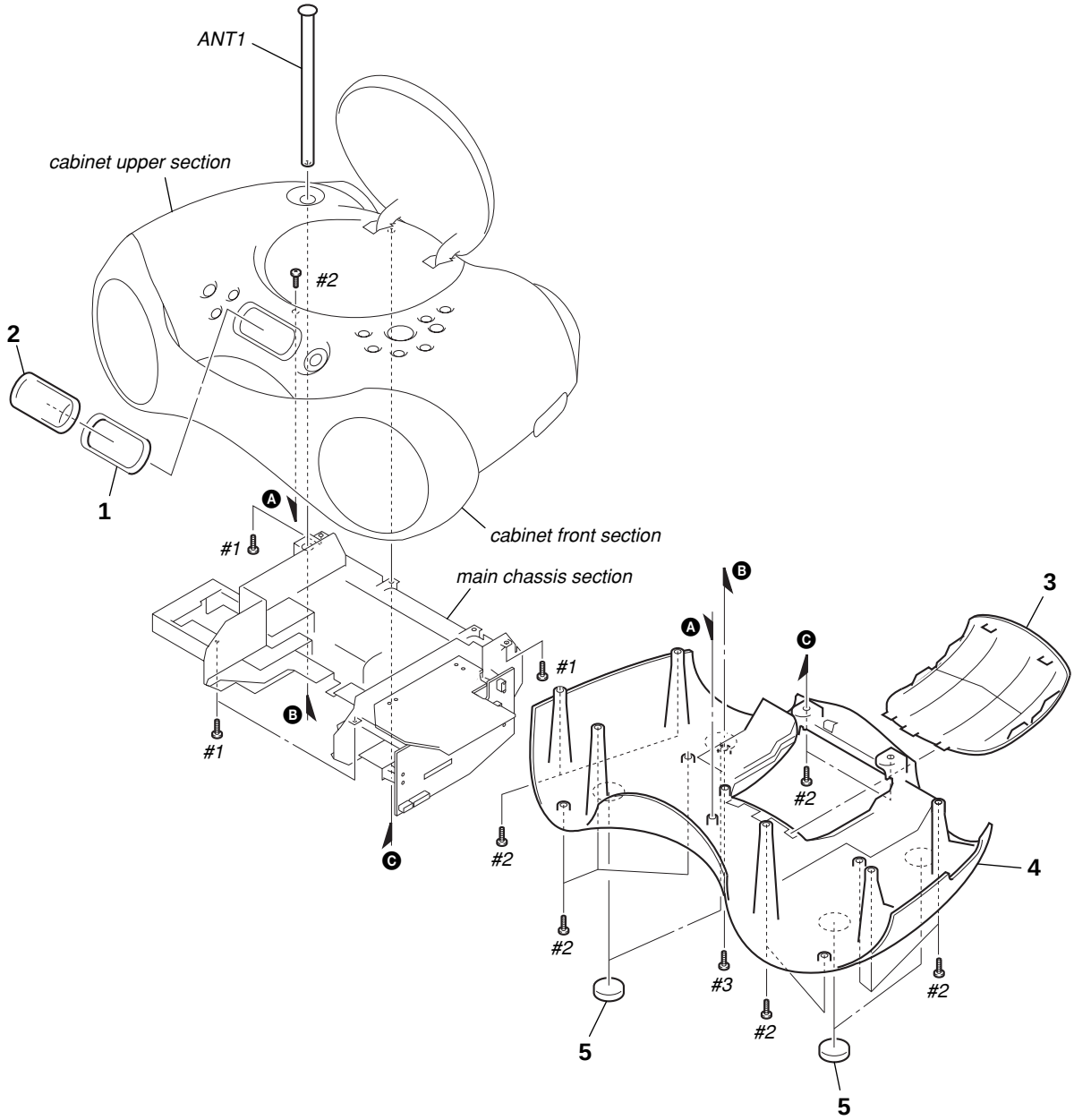
SECTION 6
EXPLODED VIEWS

NOTE:
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Abbreviation
  CND : Canadian model IT : Italian model
  EE : East European model
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Accessories are given in the last of the electrical parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

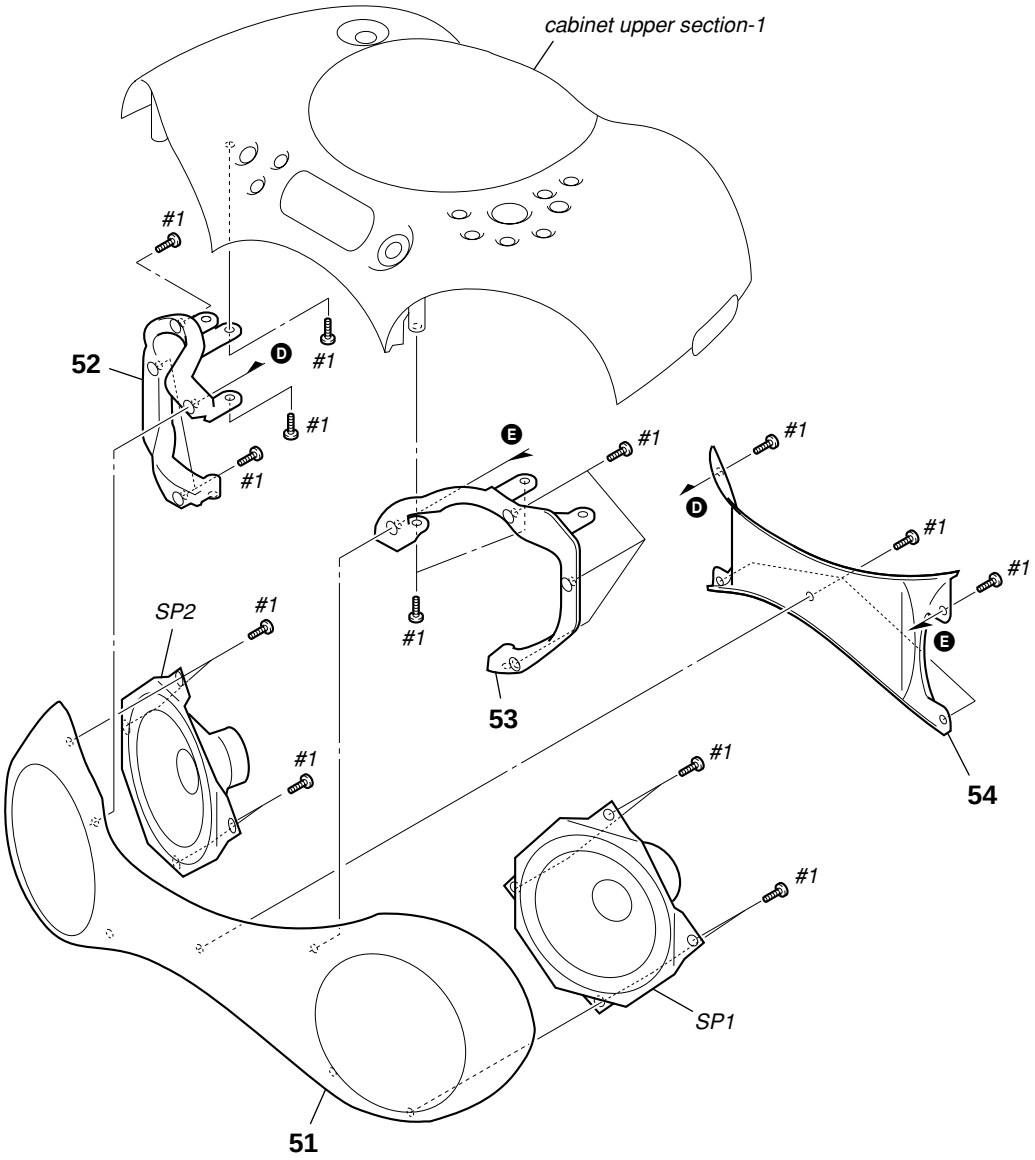
Les composants identifié par une marque ⚠ sont critiquens pour la séurité
Ne les remplacer que par une pièe portant le numéo spéifié

6-1. CABINET LOWER SECTION



Ref. No.	Part No.	Description	Remark
1	3-236-245-01	TAPE (WINDOW), DOUBLE-FACE	
2	3-236-085-01	WINDOW, LCD	
3	3-236-080-01	LID, BATTERY CASE	
4	3-236-076-01	CABINET (LOWER) (AEP, UK, IT, EE)	
4	3-236-076-11	CABINET (LOWER) (US)	
4	3-236-076-21	CABINET LOWER (CND)	
5	3-236-229-01	FOOT (A), RUBBER	
ANT1	1-754-226-12	ANTENNA, TELESCOPIC	
#1	7-685-647-14	SCREW +BVTP 3X10 TYPE2 N-S	
#2	7-685-649-14	SCREW +BVTP 3X14 TYPE2 N-S	
#3	7-682-548-04	SCREW +B 3X8	

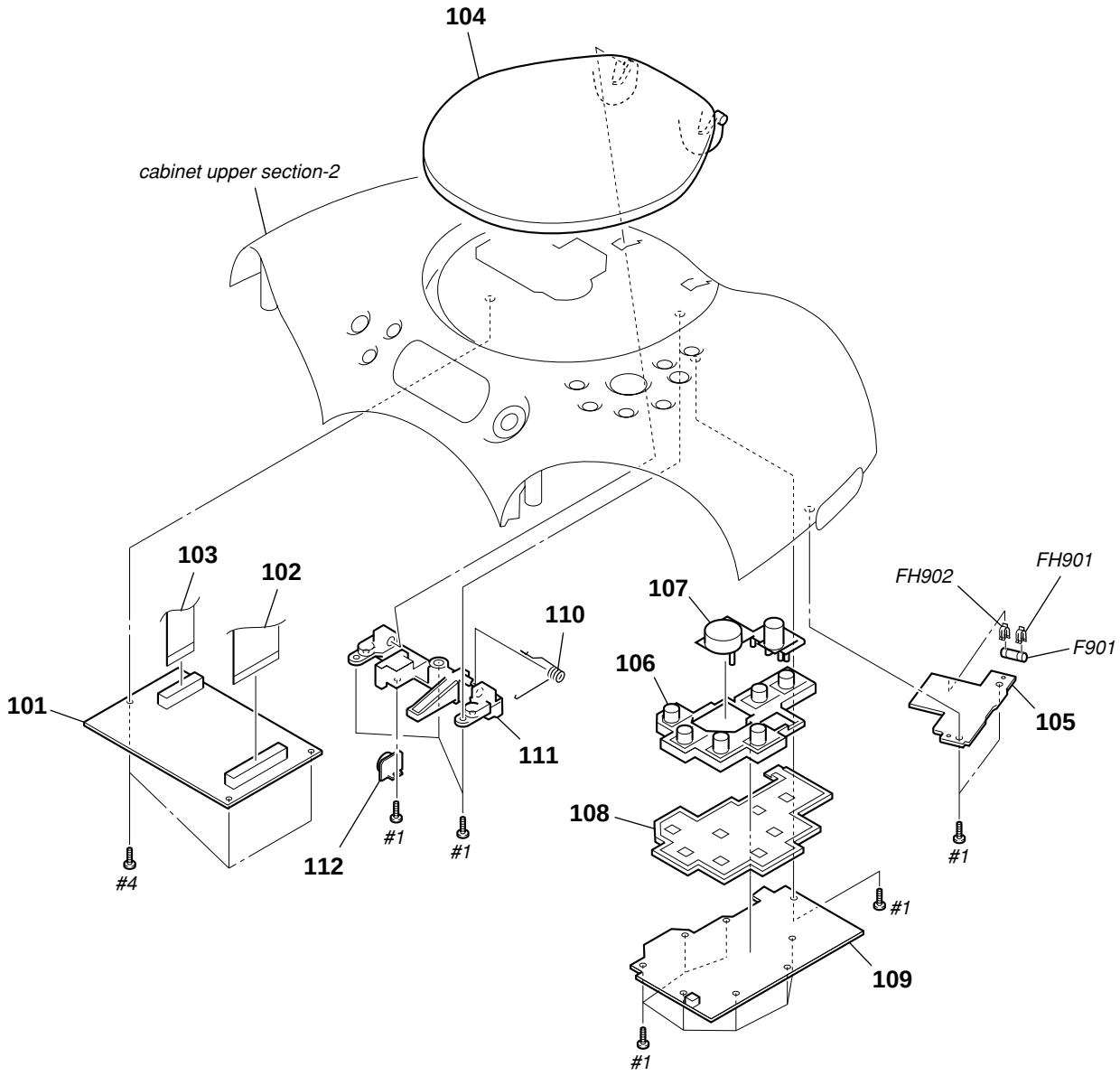
6-2. CABINET FRONT SECTION



Ref. No.	Part No.	Description	Remark
51	X-3381-568-1	CABINET SUB ASSY, FRONT	
52	3-236-094-01	HOLDER (LEFT), FRONT	
53	3-236-095-01	HOLDER (RIGHT), FRONT	
54	3-236-078-01	COVER, HANDLE	

Ref. No.	Part No.	Description	Remark
SP1	1-544-988-11	SREAKER (10cm) (L)	
SP2	1-544-988-11	SREAKER (10cm) (R)	
#1	7-685-647-14	SCREW +BVTP 3X10 TYPE2 N-S	

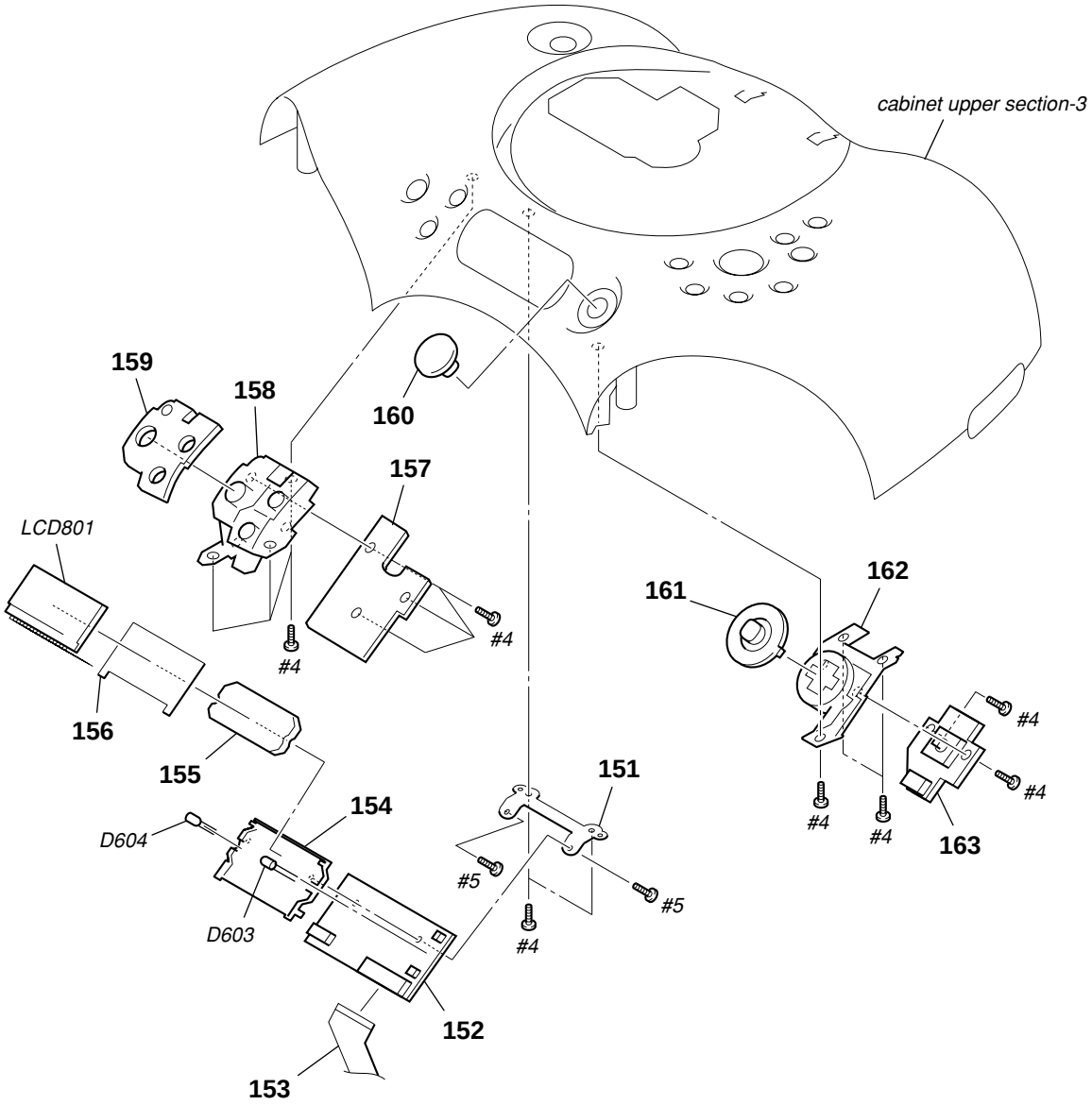
6-3. CABINET UPPER SECTION-1



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifié par une marque ⚠ sont critiques pour la séurité Ne les remplacer que par une pièe portant le numéo spéifié

Ref. No.	Part No.	Description	Remark
* 101	A-3021-699-A	CDMP3 BOARD, COMPLETE	
102	1-777-843-11	WIRE (FLAT TYPE) (30 CORE)	
103	1-769-326-11	WIRE (FLAT TYPE) (20 CORE)	
104	3-236-079-01	LID, CD	
* 105	1-683-740-11	JACK BOARD	
106	3-236-090-01	BUTTON, VOLUME (▶II. ■)	
107	3-236-091-01	BUTTON, CD (+. –. MODE. REPEAT. ESP. MEGABASS)	
108	3-236-223-01	RUBBER, VOLUME	
* 109	1-683-743-11	VOLUME BOARD	
110	3-236-240-01	SPRING, CD	
111	3-236-093-01	HOLDER, CD	
112	3-049-782-31	DAMPER	
⚠F901	1-533-449-11	FUSE, GLASS TUBE (DIA. 5) (2A/125V) (US, CND)	
⚠F901	1-533-468-11	FUSE, GLASS TUBE (DIA. 5) (2A/250V) (AEP, UK, IT, EE)	
FH901	1-533-233-31	HOLDER, FUSE	
FH902	1-533-233-31	HOLDER, FUSE	
#1	7-685-647-14	SCREW +BVTP 3X10 TYPE2 N-S	
#4	7-685-534-14	SCREW +BTP 2.6X8 TYPE2 N-S	

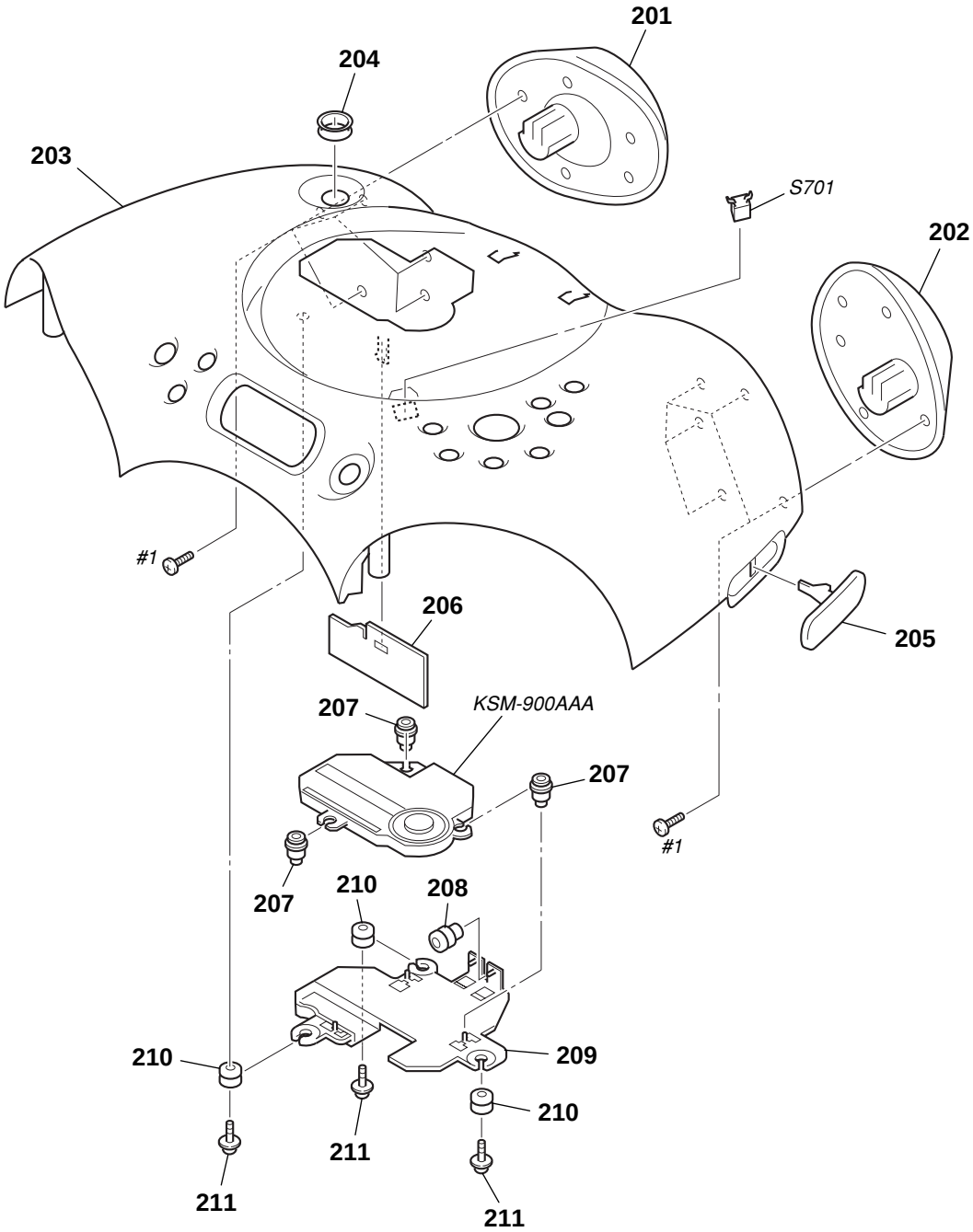
6-4. CABINET UPPER SECTION-2



Ref. No.	Part No.	Description	Remark
151	3-241-095-01	BRACKET, LCD	
* 152	1-683-745-11	LCD BOARD	
153	1-773-160-11	WIRE (FLAT TYPE) (21 CORE)	
154	3-236-092-01	HOLDER, LCD	
155	3-236-086-01	PLATE, LIGHT GUIDE	
156	3-236-241-01	ILLUMINATOR (LCD)	
* 157	1-683-746-11	BUTTON POWER BOARD	
158	3-236-082-01	BUTTON, POWER (DISPLAY. BAND. OPERATE)	
159	3-236-224-01	RUBBER, POWER	

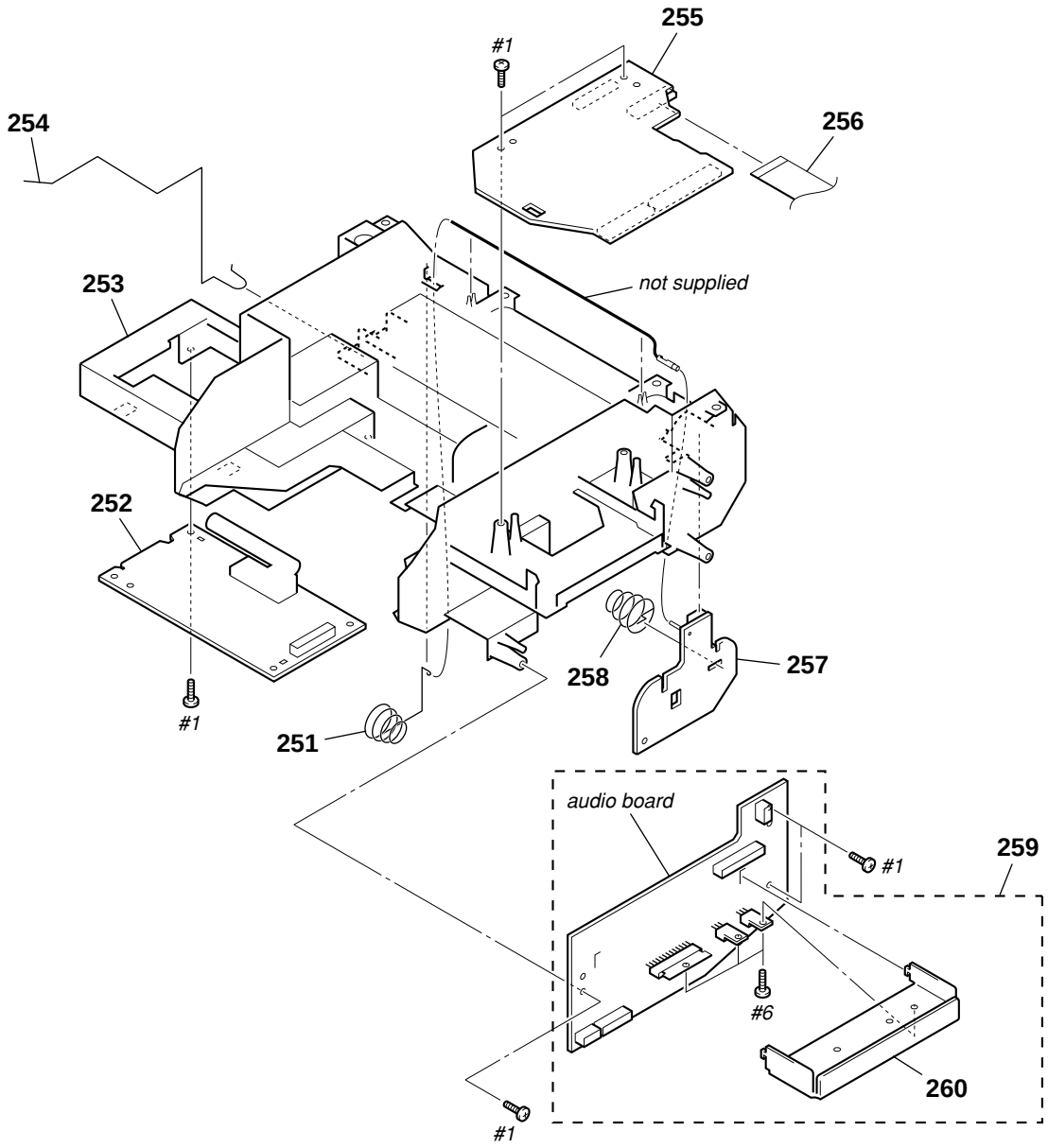
Ref. No.	Part No.	Description	Remark
160	3-236-083-01	BUTTON, ENTER	
161	3-236-225-01	RUBBER, ENTER	
162	3-236-081-01	HOLDER, ENTER	
* 163	1-683-744-11	ENTER BOARD	
D603	6-500-076-01	DIODE SLI-343YC (LCD BACKLIGHT)	
D604	6-500-076-01	DIODE SLI-343YC (LCD BACKLIGHT)	
LCD801	1-477-192-11	INDICATOR UNIT, LIQUID CRYSTAL	
#4	7-685-534-14	SCREW +BTP 2.6X8 TYPE2 N-S	
#5	7-685-533-19	SCREW +BTP 2.6X6 TYPE2 N-S	

6-5. CABINET UPPER SECTION-3



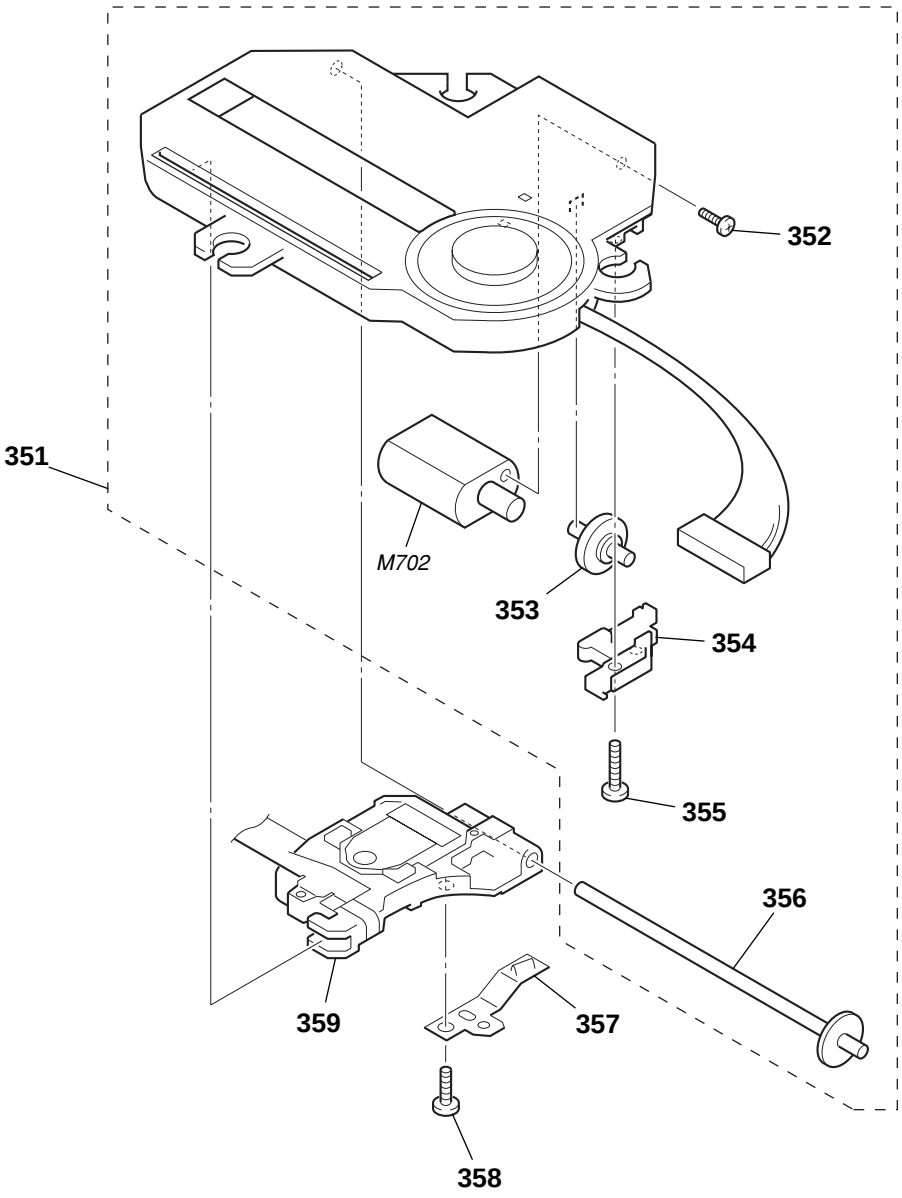
Ref. No.	Part No.	Description	Remark
201	3-236-227-01	CAP (LEFT), RUBBER	
202	3-236-228-01	CAP (RIGHT), RUBBER	
203	X-3381-567-1	CABINET SUB ASSY, POWER	
204	3-236-233-01	RUBBER ANT	
205	3-236-226-01	RUBBER JACK	
* 206	1-683-741-11	RELAY BOARD	
207	4-975-762-11	INSULATOR	
208	4-975-811-01	INSULATOR	
209	3-236-096-01	HOLDER (UPPER)	
210	3-044-314-01	RUBBER (VIBRATION)	
211	3-044-315-01	SCREW, +PWH TAPPING	
S701	1-692-960-11	SWITCH, PUSH (1 KEY) (CD LID OPEN/CLOSE)	
#1	7-685-647-14	SCREW +BVTP 3X10 TYPE2 N-S	

6-6. MAIN CHASSIS SECTION



Ref. No.	Part No.	Description	Remark
251	3-236-242-01	SPRING (+ –), BATTERY	
* 252	A-3021-425-A	TUNER BOARD, COMPLETE (US, CND)	
* 252	A-3021-475-A	TUNER BOARD, COMPLETE (AEP, UK, IT, EE)	
253	3-236-097-01	CHASSIS, MAIN	
254	3-236-239-01	TERMINAL, ANTENNA	
* 255	A-3178-118-A	CONTROL BOARD, COMPLETE (AEP, UK, IT, EE)	
* 255	A-3178-119-A	CONTROL BOARD, COMPLETE (US, CND)	
256	1-773-070-11	WIRE (FLAT TYPE) (18 CORE)	
* 257	1-683-742-11	BATTERY BOARD	
258	3-028-154-01	TERMINAL (–), BATT	
* 259	A-3021-701-A	AUDIO BOARD, COMPLETE	
260	3-236-238-01	HEAT SINK	
#1	7-685-647-14	SCREW +BVTP 3X10 TYPE2 N-S	
#6	7-685-646-14	SCREW +BVTP 3X8 TYPE2 N-S	

6-7. OPTICAL PICK-UP SECTION (KSM-900AAA)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité Ne les remplacer que par une pièce portant le numéro spécifié

Ref. No.	Part No.	Description	Remark
* 351	A-4902-666-A	MD ASSY (900AAA-RP)	
352	3-033-806-01	SCREW (M2X2.5)	
353	2-165-627-01	GEAR (B) (780C)	
354	2-165-626-01	HOLDER (780C)	
355	2-646-352-01	SCREW (2X8)	
356	X-2162-234-1	SCREW ASSY (780E), SLED	

Ref. No.	Part No.	Description	Remark
357	2-165-630-02	SPRING (780C), RACK	
358	2-646-358-11	SCREW (B1.7X4)	
⚠359	8-820-137-02	OPTICAL PICK-UP KSS-900A/C2RP	
M702	A-4900-169-A	MOTOR ASSY (780CP), SLED	

SECTION 7
ELECTRICAL PARTS LIST

AUDIO

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Abbreviation
  CND : Canadian model
  EE : East European model
  IT : Italian model
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA. . : µA. . uPA. . : µPA. .
  uPB. . : µPB. . uPC. . : µPC. .
  uPD. . : µPD. .
- CAPACITORS
  uF: µF
- COILS
  uH: µH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
*	A-3021-701-A	AUDIO BOARD, COMPLETE			
		**********			
	3-236-238-01	HEAT SINK			
	7-685-646-14	SCREW +BVTP 3X8 TYPE2 N-S			
		< CAPACITOR >			
C101	1-126-963-11	ELECT	4.7uF	20%	50V
C102	1-126-960-11	ELECT	1uF	20%	50V
C103	1-126-960-11	ELECT	1uF	20%	50V
C104	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C105	1-126-959-11	ELECT	0.47uF	20%	50V
C106	1-126-960-11	ELECT	1uF	20%	50V
C107	1-126-947-11	ELECT	47uF	20%	10V
C108	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C109	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C110	1-136-157-00	MYLAR	0.022uF	10%	50V
C111	1-126-934-11	ELECT	220uF	20%	10V
C112	1-126-927-11	ELECT	2200uF	20%	10V
C113	1-124-252-00	ELECT	0.33uF	20%	50V
C114	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C115	1-164-816-11	CERAMIC CHIP	220P	2%	50V
C201	1-126-963-11	ELECT	4.7uF	20%	50V
C202	1-126-960-11	ELECT	1uF	20%	50V
C203	1-126-960-11	ELECT	1uF	20%	50V
C204	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C205	1-126-959-11	ELECT	0.47uF	20%	50V
C206	1-126-960-11	ELECT	1uF	20%	50V
C207	1-126-947-11	ELECT	47uF	20%	10V
C208	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C209	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C210	1-136-157-00	MYLAR	0.022uF	10%	50V
C211	1-126-934-11	ELECT	220uF	20%	10V
C212	1-126-927-11	ELECT	2200uF	20%	10V
C213	1-124-252-00	ELECT	0.33uF	20%	50V
C214	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C215	1-164-816-11	CERAMIC CHIP	220P	2%	50V
C301	1-126-768-11	ELECT	2200uF	20%	16V
C304	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C305	1-126-923-11	ELECT	220uF	20%	10V
C306	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C308	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C309	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C310	1-126-965-91	ELECT	22uF	20%	50V
C312	1-104-665-11	ELECT	100uF	20%	10V
C313	1-126-947-11	ELECT	47uF	20%	10V
C314	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C315	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C316	1-126-967-11	ELECT	47uF	20%	50V
C317	1-126-965-11	ELECT	22uF	20%	50V
C319	1-126-934-11	ELECT	220uF	20%	10V
C320	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C321	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C322	1-104-658-11	ELECT	100uF	20%	10V
C323	1-104-658-11	ELECT	100uF	20%	10V
		< CONNECTOR >			
* CNP301	1-784-779-21	CONNECTOR, FFC 18P			
* CNP901	1-785-655-11	PIN, CONNECTOR (PC BOARD) 3P			
* CN302	1-815-445-11	PIN, CONNECTOR 4P			
		< DIODE >			
D101	8-719-991-33	DIODE 1SS133T-77			
D201	8-719-991-33	DIODE 1SS133T-77			
D301	8-719-109-72	DIODE MTZJ-T-77-3.9B			
D302	8-719-109-97	DIODE MTZJ-T-77-6.8B			
D303	8-719-991-33	DIODE 1SS133T-77			
		< IC >			
IC301	8-759-539-45	IC M62429P			
IC302	8-759-426-51	IC BA5417			
		< TRANSISTOR >			
Q103	8-729-036-89	TRANSISTOR	KTC3198GR-A		
Q104	8-729-920-31	TRANSISTOR	DTC343TK-T-146		
Q105	8-729-036-89	TRANSISTOR	KTC3198GR-A		
Q203	8-729-036-89	TRANSISTOR	KTC3198GR-A		
Q204	8-729-920-31	TRANSISTOR	DTC343TK-T-146		
Q205	8-729-036-89	TRANSISTOR	KTC3198GR-A		
Q301	8-729-037-13	TRANSISTOR	KTA1271Y-AT		
Q302	8-729-036-77	TRANSISTOR	KRC107M-AT		
Q303	8-729-037-34	TRANSISTOR	KRA107M-AT		
Q304	8-729-052-52	TRANSISTOR	KTC2026Y		
Q305	8-729-052-52	TRANSISTOR	KTC2026Y		
Q306	8-729-036-86	TRANSISTOR	KTC3203Y-AT		

Ref. No.	Part No.	Description			Remark
		< RESISTOR >			
R104	1-216-841-11	METAL CHIP	47K	5%	1/10W
R105	1-216-821-11	METAL CHIP	1K	5%	1/10W
R106	1-216-821-11	METAL CHIP	1K	5%	1/10W
R107	1-218-867-11	RES-CHIP	6.8K	5%	1/10W
R108	1-216-817-11	METAL CHIP	470	5%	1/10W
R109	1-216-821-11	METAL CHIP	1K	5%	1/10W
R110	1-216-841-11	METAL CHIP	47K	5%	1/10W
R112	1-216-809-11	METAL CHIP	100	5%	1/10W
R113	1-216-789-11	METAL CHIP	2.2	5%	1/10W
R114	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R116	1-216-817-11	METAL CHIP	470	5%	1/10W
R117	1-216-821-11	METAL CHIP	1K	5%	1/10W
R118	1-216-821-11	METAL CHIP	1K	5%	1/10W
R119	1-216-817-11	METAL CHIP	470	5%	1/10W
R204	1-216-841-11	METAL CHIP	47K	5%	1/10W
R205	1-216-821-11	METAL CHIP	1K	5%	1/10W
R206	1-216-821-11	METAL CHIP	1K	5%	1/10W
R207	1-218-867-11	RES-CHIP	6.8K	5%	1/10W
R208	1-216-817-11	METAL CHIP	470	5%	1/10W
R209	1-216-821-11	METAL CHIP	1K	5%	1/10W
R210	1-216-841-11	METAL CHIP	47K	5%	1/10W
R212	1-216-809-11	METAL CHIP	100	5%	1/10W
R213	1-216-789-11	METAL CHIP	2.2	5%	1/10W
R214	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R216	1-216-817-11	METAL CHIP	470	5%	1/10W
R217	1-216-821-11	METAL CHIP	1K	5%	1/10W
R218	1-216-821-11	METAL CHIP	1K	5%	1/10W
R219	1-216-817-11	METAL CHIP	470	5%	1/10W
R301	1-216-841-11	METAL CHIP	47K	5%	1/10W
R302	1-216-821-11	METAL CHIP	1K	5%	1/10W
R303	1-216-813-11	METAL CHIP	220	5%	1/10W
R304	1-216-805-11	METAL CHIP	47	5%	1/10W
R305	1-216-029-00	METAL CHIP	150	5%	1/10W
R306	1-216-029-00	METAL CHIP	150	5%	1/10W
R307	1-216-811-11	METAL CHIP	150	5%	1/10W
R308	1-216-811-11	METAL CHIP	150	5%	1/10W
R309	1-216-841-11	METAL CHIP	47K	5%	1/10W
R310	1-216-805-11	METAL CHIP	47	5%	1/10W
R312	1-216-853-11	METAL CHIP	470K	5%	1/10W
**********					
*	1-683-742-11	BATTERY BOARD			
		**********			
	3-028-154-01	TERMINAL (–) , BATTERY			
		< FERRITE BEAD >			
FB901	1-410-397-21	FERRITE	1.1uH		
FB902	1-410-397-21	FERRITE	1.1uH		
		< COIL >			
L901	1-410-521-11	INDUCTOR	100uH		
**********					

Ref. No.	Part No.	Description			Remark
*	1-683-746-11	BUTTON POWER BOARD			
		**********			
		< CAPACITOR >			
C622	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
		< CONNECTOR >			
CN604	1-815-553-11	PIN, CONNECTOR (PC BOARD) 2P			
		< LED >			
D602	6-500-076-01	LED SLI-343YC (MP3)			
		< RESISTOR >			
R601	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R602	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R628	1-216-813-11	METAL CHIP	220	5%	1/10W
		< SWITCH >			
S601	1-786-050-21	SWITCH, KEY BOARD (POWER)			
S602	1-786-050-21	SWITCH, KEY BOARD (BAND/AUTO PRESET)			
S603	1-786-050-21	SWITCH, KEY BOARD (DISPLAY)			
**********					
*	A-3021-699-A	CDMP3 BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C701	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C702	1-104-665-11	ELECT	100uF	20%	10V
C703	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C704	1-104-665-11	ELECT	100uF	20%	10V
C705	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C706	1-104-665-11	ELECT	100uF	20%	10V
C707	1-126-947-11	ELECT	47uF	20%	10V
C708	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C709	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C710	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C711	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C712	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C713	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C714	1-115-156-11	CERAMIC CHIP	1uF		10V
C715	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C716	1-115-156-11	CERAMIC CHIP	1uF		10V
C717	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C718	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C719	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C720	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C721	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C722	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C723	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C724	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C725	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C726	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C728	1-126-935-11	ELECT	470uF	20%	10V
C729	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C730	1-126-927-11	ELECT	2200uF	20%	10V
C731	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V

CDMP3

Ref. No.	Part No.	Description			Remark
C732	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C733	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C734	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C735	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C736	1-126-960-11	ELECT	1uF	20%	50V
C737	1-126-960-11	ELECT	1uF	20%	50V
C738	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C741	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C743	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C744	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C745	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C746	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C747	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C748	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C749	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C750	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C751	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C752	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C753	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C754	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C755	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C757	1-115-156-11	CERAMIC CHIP	1uF		10V
C758	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C759	1-115-156-11	CERAMIC CHIP	1uF		10V
C760	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C761	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C763	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C764	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C765	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C766	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C767	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C768	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C769	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C770	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C771	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C772	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C773	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C774	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C775	1-115-156-11	CERAMIC CHIP	1uF		10V
C776	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C777	1-104-665-11	ELECT	100uF	20%	10V
C778	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C779	1-126-926-11	ELECT	1000uF	20%	10V
C780	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C781	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C782	1-104-665-11	ELECT	100uF	20%	10V
C783	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C784	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C785	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C786	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C787	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C788	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C790	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C791	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C792	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C793	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C794	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C795	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C796	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C797	1-115-156-11	CERAMIC CHIP	1uF		10V
C798	1-126-926-11	ELECT	1000uF	20%	10V
C799	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
		< CONNECTOR >			
* CNP701	1-784-781-21	CONNECTOR, FFC 20P			
* CNP702	1-784-791-21	CONNECTOR, FFC 30P			
		< DIODE >			
D701	8-719-991-33	DIODE 1SS133T-77			
D702	8-719-991-33	DIODE 1SS133T-77			
		< FERRITE BEAD >			
FB701	1-414-229-11	FERRITE	0uH		
FB702	1-469-835-21	FERRITE	0uH		
		< IC >			
IC701	6-701-790-01	IC LC78645YE-US-E			
IC702	6-701-787-11	IC BA5826FP-E2			
IC703	6-701-791-01	IC LC78683E-US-E			
IC704	8-759-597-78	IC MSM54V16258BSL-40TSK			
		< COIL >			
L701	1-412-973-11	INDUCTOR	0.33uH		
L702	1-412-977-11	INDUCTOR	0.68uH		
L703	1-412-977-11	INDUCTOR	0.68uH		
		< TRANSISTOR >			
Q701	8-729-054-57	TRANSISTOR	KTN2907AS-RTK		
		< RESISTOR >			
R701	1-216-835-11	METAL CHIP	15K	5%	1/10W
R702	1-216-835-11	METAL CHIP	15K	5%	1/10W
R703	1-216-849-11	METAL CHIP	220K	5%	1/10W
R704	1-216-849-11	METAL CHIP	220K	5%	1/10W
R705	1-216-809-11	METAL CHIP	100	5%	1/10W
R706	1-216-797-11	METAL CHIP	10	5%	1/10W
R707	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R708	1-216-833-11	METAL CHIP	10K	5%	1/10W
R710	1-216-833-11	METAL CHIP	10K	5%	1/10W
R711	1-216-845-11	METAL CHIP	100K	5%	1/10W
R712	1-216-833-11	METAL CHIP	10K	5%	1/10W
R713	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R714	1-216-837-11	METAL CHIP	22K	5%	1/10W
R715	1-216-815-11	METAL CHIP	330	5%	1/10W
R717	1-216-809-11	METAL CHIP	100	5%	1/10W
R718	1-216-809-11	METAL CHIP	100	5%	1/10W
R719	1-216-809-11	METAL CHIP	100	5%	1/10W
R720	1-216-809-11	METAL CHIP	100	5%	1/10W
R721	1-216-809-11	METAL CHIP	100	5%	1/10W
R722	1-216-809-11	METAL CHIP	100	5%	1/10W
R723	1-216-809-11	METAL CHIP	100	5%	1/10W
R724	1-216-809-11	METAL CHIP	100	5%	1/10W
R725	1-216-813-11	METAL CHIP	220	5%	1/10W
R728	1-216-809-11	METAL CHIP	100	5%	1/10W
R729	1-216-809-11	METAL CHIP	100	5%	1/10W

Ref. No.	Part No.	Description			Remark
R730	1-216-809-11	METAL CHIP	100	5%	1/10W
R731	1-216-809-11	METAL CHIP	100	5%	1/10W
R732	1-216-809-11	METAL CHIP	100	5%	1/10W
R733	1-216-809-11	METAL CHIP	100	5%	1/10W
R734	1-216-809-11	METAL CHIP	100	5%	1/10W
R735	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R736	1-216-809-11	METAL CHIP	100	5%	1/10W
R737	1-216-809-11	METAL CHIP	100	5%	1/10W
R738	1-216-809-11	METAL CHIP	100	5%	1/10W
R739	1-216-809-11	METAL CHIP	100	5%	1/10W
R740	1-216-809-11	METAL CHIP	100	5%	1/10W
R741	1-216-809-11	METAL CHIP	100	5%	1/10W
R742	1-216-809-11	METAL CHIP	100	5%	1/10W
R743	1-216-833-11	METAL CHIP	10K	5%	1/10W
R744	1-216-819-11	METAL CHIP	680	5%	1/10W
R746	1-216-819-11	METAL CHIP	680	5%	1/10W
R748	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R749	1-216-833-11	METAL CHIP	10K	5%	1/10W
R750	1-216-813-11	METAL CHIP	220	5%	1/10W
R751	1-216-821-11	METAL CHIP	1K	5%	1/10W
R752	1-216-809-11	METAL CHIP	100	5%	1/10W
R754	1-216-809-11	METAL CHIP	100	5%	1/10W
R755	1-216-809-11	METAL CHIP	100	5%	1/10W
R756	1-216-809-11	METAL CHIP	100	5%	1/10W
R757	1-216-809-11	METAL CHIP	100	5%	1/10W
R758	1-216-809-11	METAL CHIP	100	5%	1/10W
R759	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R760	1-216-821-11	METAL CHIP	1K	5%	1/10W
R761	1-216-821-11	METAL CHIP	1K	5%	1/10W
R762	1-216-809-11	METAL CHIP	100	5%	1/10W
R763	1-216-809-11	METAL CHIP	100	5%	1/10W
R764	1-216-809-11	METAL CHIP	100	5%	1/10W
R765	1-216-809-11	METAL CHIP	100	5%	1/10W
R766	1-216-809-11	METAL CHIP	100	5%	1/10W
R767	1-216-809-11	METAL CHIP	100	5%	1/10W
R768	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R770	1-216-809-11	METAL CHIP	100	5%	1/10W
R771	1-216-809-11	METAL CHIP	100	5%	1/10W
R772	1-216-809-11	METAL CHIP	100	5%	1/10W
R773	1-216-809-11	METAL CHIP	100	5%	1/10W
R774	1-216-809-11	METAL CHIP	100	5%	1/10W
R775	1-216-809-11	METAL CHIP	100	5%	1/10W
R776	1-216-809-11	METAL CHIP	100	5%	1/10W
R777	1-216-809-11	METAL CHIP	100	5%	1/10W
R778	1-216-809-11	METAL CHIP	100	5%	1/10W
R779	1-216-809-11	METAL CHIP	100	5%	1/10W
R780	1-216-809-11	METAL CHIP	100	5%	1/10W
R781	1-216-809-11	METAL CHIP	100	5%	1/10W
R782	1-216-809-11	METAL CHIP	100	5%	1/10W
R783	1-216-809-11	METAL CHIP	100	5%	1/10W
R784	1-216-809-11	METAL CHIP	100	5%	1/10W
R785	1-216-805-11	METAL CHIP	47	5%	1/10W
R786	1-216-821-11	METAL CHIP	1K	5%	1/10W

< VIBRATOR >

X701	1-795-173-21	VIBRATOR, CERAMIC (33.86MHz)	

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Ref. No.	Part No.	Description			Remark
*	A-3178-118-A	CONTROL BOARD, COMPLETE			(AEP, UK, IT, EE)
*	A-3178-119-A	CONTROL BOARD, COMPLETE (US, CND)			
		**********			

< CAPACITOR >

C601	1-126-926-11	ELECT	1000uF	20%	10V
C602	1-126-934-11	ELECT	220uF	20%	10V
C801	1-126-964-11	ELECT	10uF	20%	50V
C802	1-115-156-11	CERAMIC CHIP	1uF		10V
C803	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C804	1-104-665-11	ELECT	100uF	20%	10V
C805	1-104-665-11	ELECT	100uF	20%	10V
C806	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C807	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C811	1-162-925-11	CERAMIC CHIP	68PF	5%	50V
C812	1-162-925-11	CERAMIC CHIP	68PF	5%	50V
C813	1-162-925-11	CERAMIC CHIP	68PF	5%	50V
C814	1-162-925-11	CERAMIC CHIP	68PF	5%	50V
C815	1-162-925-11	CERAMIC CHIP	68PF	5%	50V
C816	1-162-925-11	CERAMIC CHIP	68PF	5%	50V
C817	1-162-925-11	CERAMIC CHIP	68PF	5%	50V
C818	1-162-925-11	CERAMIC CHIP	68PF	5%	50V
C819	1-162-925-11	CERAMIC CHIP	68PF	5%	50V
C820	1-162-925-11	CERAMIC CHIP	68PF	5%	50V
C821	1-162-925-11	CERAMIC CHIP	68PF	5%	50V
C823	1-162-925-11	CERAMIC CHIP	68PF	5%	50V
C824	1-164-390-11	CERAMIC CHIP	330PF	5%	50V
C825	1-164-390-11	CERAMIC CHIP	330PF	5%	50V
C827	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C828	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C831	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C832	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C833	1-104-658-11	ELECT	100uF	20%	10V
C834	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C838	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C839	1-162-975-11	CERAMIC CHIP	24PF	5%	50V
C843	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C844	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C846	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C847	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C849	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C850	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C852	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C855	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C856	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C857	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C858	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C859	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C878	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C881	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C882	1-162-975-11	CERAMIC CHIP	24PF	5%	50V
C887	1-162-975-11	CERAMIC CHIP	24PF	5%	50V
C891	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C892	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V

< CONNECTOR >

CNP801	1-784-743-21	CONNECTOR, FFC 21P	

CONTROL

Ref. No.	Part No.	Description			Remark
* CNP802	1-784-752-21	CONNECTOR, FFC 30P			
* CNP803	1-784-740-21	CONNECTOR, FFC 18P			
		< DIODE >			
D601	8-719-991-33	DIODE 1SS133T-77			
D605	8-719-109-97	DIODE MTZJ-T-77-6.8B			
D606	8-719-109-63	DIODE MTZJ-T-77-3.0B			
		< IC >			
IC801	6-801-820-01	IC uPD784216AGF-525-3BA			
IC802	8-759-658-46	IC S-81233SGY-Z			
IC803	8-759-645-87	IC PST9128-T			
IC804	8-759-643-58	IC BR24C01AF-W			
		< COIL >			
L801	1-410-517-11	INDUCTOR	47uH		
L802	1-414-142-61	INDUCTOR	1uH		
L803	1-410-336-61	INDUCTOR	220uH		
L804	1-414-142-61	INDUCTOR	1uH		
L805	1-410-332-31	INDUCTOR	47uH		
L806	1-414-142-61	INDUCTOR	1uH		
L807	1-410-328-21	INDUCTOR	100uH		
		< TRANSISTOR >			
Q101	8-729-920-31	TRANSISTOR	DTC343TK-T-146		
Q102	8-729-920-31	TRANSISTOR	DTC343TK-T-146		
Q201	8-729-920-31	TRANSISTOR	DTC343TK-T-146		
Q202	8-729-920-31	TRANSISTOR	DTC343TK-T-146		
Q601	8-729-037-13	TRANSISTOR	KTA1271Y-AT		
Q603	8-729-037-34	TRANSISTOR	KRA107M-AT		
Q604	8-729-037-34	TRANSISTOR	KRA107M-AT		
Q605	8-729-037-34	TRANSISTOR	KRA107M-AT		
Q606	8-729-212-02	TRANSISTOR	KTC3203Y-AT		
Q801	8-729-922-66	TRANSISTOR	2SC2410S-TPN		
Q802	8-729-922-66	TRANSISTOR	2SC2410S-TPN		
		< RESISTOR >			
R101	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R102	1-216-835-11	METAL CHIP	15K	5%	1/10W
R103	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R201	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R202	1-216-835-11	METAL CHIP	15K	5%	1/10W
R203	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R608	1-216-833-11	METAL CHIP	10K	5%	1/10W
R616	1-216-833-11	METAL CHIP	10K	5%	1/10W
R619	1-216-841-11	METAL CHIP	47K	5%	1/10W
R620	1-216-833-11	METAL CHIP	10K	5%	1/10W
R621	1-216-841-11	METAL CHIP	47K	5%	1/10W
R622	1-216-845-11	METAL CHIP	100K	5%	1/10W
R623	1-216-821-11	METAL CHIP	1K	5%	1/10W
R626	1-216-845-11	METAL CHIP	100K	5%	1/10W
R627	1-216-813-11	METAL CHIP	220	5%	1/10W
R629	1-216-845-11	METAL CHIP	100K	5%	1/10W
R630	1-216-833-11	METAL CHIP	10K	5%	1/10W
R631	1-216-841-11	METAL CHIP	47K	5%	1/10W
R632	1-216-833-11	METAL CHIP	10K	5%	1/10W
R633	1-216-841-11	METAL CHIP	47K	5%	1/10W
R634	1-216-845-11	METAL CHIP	100K	5%	1/10W
R635	1-216-821-11	METAL CHIP	1K	5%	1/10W
R652	1-216-845-11	METAL CHIP	100K	5%	1/10W
R801	1-216-821-11	METAL CHIP	1K	5%	1/10W
R802	1-216-821-11	METAL CHIP	1K	5%	1/10W
R803	1-216-821-11	METAL CHIP	1K	5%	1/10W
R804	1-216-821-11	METAL CHIP	1K	5%	1/10W
R805	1-216-821-11	METAL CHIP	1K	5%	1/10W
R806	1-216-821-11	METAL CHIP	1K	5%	1/10W (US, CND)
R807	1-216-821-11	METAL CHIP	1K	5%	1/10W
R809	1-216-821-11	METAL CHIP	1K	5%	1/10W (AEP, UK, IT, EE)
R810	1-216-821-11	METAL CHIP	1K	5%	1/10W
R811	1-216-821-11	METAL CHIP	1K	5%	1/10W
R812	1-216-821-11	METAL CHIP	1K	5%	1/10W
R819	1-216-821-11	METAL CHIP	1K	5%	1/10W
R820	1-216-821-11	METAL CHIP	1K	5%	1/10W
R821	1-216-821-11	METAL CHIP	1K	5%	1/10W
R824	1-216-809-11	METAL CHIP	100	5%	1/10W
R825	1-216-809-11	METAL CHIP	100	5%	1/10W
R826	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R827	1-216-809-11	METAL CHIP	100	5%	1/10W
R828	1-216-809-11	METAL CHIP	100	5%	1/10W
R829	1-216-821-11	METAL CHIP	1K	5%	1/10W
R830	1-216-821-11	METAL CHIP	1K	5%	1/10W
R831	1-216-821-11	METAL CHIP	1K	5%	1/10W
R832	1-216-821-11	METAL CHIP	1K	5%	1/10W
R833	1-216-821-11	METAL CHIP	1K	5%	1/10W
R834	1-216-821-11	METAL CHIP	1K	5%	1/10W
R835	1-216-821-11	METAL CHIP	1K	5%	1/10W
R836	1-216-821-11	METAL CHIP	1K	5%	1/10W
R838	1-216-815-11	METAL CHIP	330	5%	1/10W
R841	1-216-833-11	METAL CHIP	10K	5%	1/10W
R842	1-216-821-11	METAL CHIP	1K	5%	1/10W
R846	1-216-821-11	METAL CHIP	1K	5%	1/10W
R847	1-216-821-11	METAL CHIP	1K	5%	1/10W
R849	1-216-809-11	METAL CHIP	100	5%	1/10W
R850	1-216-821-11	METAL CHIP	1K	5%	1/10W
R851	1-216-841-11	METAL CHIP	47K	5%	1/10W
R852	1-216-817-11	METAL CHIP	470	5%	1/10W
R853	1-216-821-11	METAL CHIP	1K	5%	1/10W
R854	1-216-821-11	METAL CHIP	1K	5%	1/10W
R855	1-216-821-11	METAL CHIP	1K	5%	1/10W
R856	1-216-821-11	METAL CHIP	1K	5%	1/10W
R857	1-216-821-11	METAL CHIP	1K	5%	1/10W
R865	1-216-809-11	METAL CHIP	100	5%	1/10W
R867	1-216-809-11	METAL CHIP	100	5%	1/10W
R868	1-216-809-11	METAL CHIP	100	5%	1/10W
R869	1-216-809-11	METAL CHIP	100	5%	1/10W
R870	1-216-809-11	METAL CHIP	100	5%	1/10W
R871	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R872	1-216-821-11	METAL CHIP	1K	5%	1/10W
R873	1-216-821-11	METAL CHIP	1K	5%	1/10W
R874	1-216-821-11	METAL CHIP	1K	5%	1/10W
R875	1-216-821-11	METAL CHIP	1K	5%	1/10W
R876	1-216-821-11	METAL CHIP	1K	5%	1/10W
R877	1-216-821-11	METAL CHIP	1K	5%	1/10W

CONTROL **ENTER** **JACK** **LCD**

Ref. No.	Part No.	Description			Remark
R878	1-216-821-11	METAL CHIP	1K	5%	1/10W
R879	1-216-809-11	METAL CHIP	100	5%	1/10W
R880	1-216-809-11	METAL CHIP	100	5%	1/10W
R881	1-216-809-11	METAL CHIP	100	5%	1/10W
R882	1-216-809-11	METAL CHIP	100	5%	1/10W
R883	1-216-809-11	METAL CHIP	100	5%	1/10W
R884	1-216-809-11	METAL CHIP	100	5%	1/10W
R885	1-216-809-11	METAL CHIP	100	5%	1/10W
R886	1-216-809-11	METAL CHIP	100	5%	1/10W
R887	1-216-809-11	METAL CHIP	100	5%	1/10W
R891	1-216-809-11	METAL CHIP	100	5%	1/10W
R892	1-216-821-11	METAL CHIP	1K	5%	1/10W
R893	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R894	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R895	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
		< VIBRATOR >			
X801	1-795-526-11	VIBRATOR, CERAMIC (5MHz)			
**********					
*	1-683-744-11	ENTER BOARD			
		**********			
		< RESISTOR >			
R603	1-216-833-11	RES-CHIP	10K	5%	1/10W
R604	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R605	1-218-867-11	RES-CHIP	6.8K	5%	1/10W
R606	1-216-835-11	METAL CHIP	15K	5%	1/10W
R607	1-216-841-11	METAL CHIP	47K	5%	1/10W
		< SWITCH >			
SW604	1-771-734-11	SWITCH, TACTILE (ENTER, PRESET, ⏮/⏭, FLDR +/–, TUNE +/–)			
**********					
*	1-683-740-11	JACK BOARD			
		**********			
		< CAPACITOR >			
C901	1-136-165-00	FILM	0.1uF	5%	50V
		< CONNECTOR >			
* CN303	1-785-660-11	PIN, CONNECTOR (PC BOARD) 8P			
		< DIODE >			
D901	8-719-063-79	DIODE 1N4002B			
		< FUSE >			
⚠F901	1-533-449-11	FUSE, GLASS TUBE (DIA.5) (2A/125V) (US, CND)			
⚠F901	1-533-468-11	FUSE, GLASS TUBE (DIA.5) (2A/250V) (AEP, UK, IT, EE)			
		< FERRITE BEAD >			
FB301	1-410-397-21	FERRITE	1.1uF		

Ref. No.	Part No.	Description			Remark
		< FUSE HOLDER >			
FH901	1-533-233-31	HOLDER, FUSE			
FH902	1-533-233-31	HOLDER, FUSE			
		< JACK >			
J301	1-815-325-11	JACK (🎧)			
J901	1-778-380-11	JACK, DC (POLARITY UNIFIED TYPE) (DC IN 9V)			
		< COIL >			
L101	1-410-750-11	INDUCTOR	0.47uH		
L201	1-410-750-11	INDUCTOR	0.47uH		
L301	1-414-142-11	INDUCTOR	1uH		
		< RESISTOR >			
R115	1-216-809-11	METAL CHIP	100	5%	1/10W
R215	1-216-809-11	METAL CHIP	100	5%	1/10W
**********					
*	1-683-745-11	LCD BOARD			
		**********			
	3-236-086-01	LIGHTING PLATE			
	3-236-092-01	HOLDER LCD			
	3-236-241-01	ILLUMINATOR (LCD)			
	3-241-095-01	BRACKET, LCD			
	7-685-533-19	SCREW +BTP 2.6X6 TYPE2 N-S			
		< CAPACITOR >			
C808	1-115-156-11	CERAMIC CHIP	1uF		10V
C809	1-115-156-11	CERAMIC CHIP	1uF		10V
C810	1-115-156-11	CERAMIC CHIP	1uF		10V
C854	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
		< CONNECTOR >			
CNP601	1-784-743-21	CONNECTOR, FFC 21P			
* CNP603	1-785-669-21	PIN, CONNECTOR (PC BOARD) 2P			
* CN604	1-785-670-11	PIN, CONNECTOR (PC BOARD) 5P			
		< DIODE >			
D603	6-500-076-01	LED SLI-343YC (LCD BACKLIGHT)			
D604	6-500-076-01	LED SLI-343YC (LCD BACKLIGHT)			
		< LIQUID CRYSTAL DISPLAY >			
LCD801	1-477-192-11	INDICATOR UNIT, LIQUID CRYSTAL			
		< RESISTOR >			
R617	1-216-813-11	METAL CHIP	220	5%	1/10W
R618	1-216-813-11	METAL CHIP	220	5%	1/10W
		< VARIABLE RESISTOR >			
RV801	1-241-767-21	RES, ADJ, CARBON 100K (LCD VOLTAGE)			
**********					

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifié par une marque ⚠ sont critiques pour la séurité Ne les remplacer que par une pièe portant le numéo spéifié

RELAY TUNER

Ref. No.	Part No.	Description			Remark
*	1-683-741-11	RELAY BOARD			
		**********			
		< CONNECTOR >			
CNP703	1-779-466-11	CONNECTOR, FFC (LIF (NON-ZIF)) 16P			
CNP704	1-565-878-11	PIN, CONNECTOR (PC BOARD) 6P			
* CNP705	1-784-781-21	CONNECTOR, FFC 20P			
**********					
*	A-3021-425-A	TUNER BOARD, COMPLETE (US, CND)			
*	A-3021-475-A	TUNER BOARD, COMPLETE (AEP, UK, IT, EE)			
		**********			
		< CAPACITOR >			
C1	1-162-923-11	CERAMIC CHIP	47PF	5% 50V	
C2	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V	(AEP, UK, IT, EE)
C3	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V	(AEP, UK, IT, EE)
C4	1-162-964-11	CERAMIC CHIP	0.001uF	10% 50V	
C5	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V	(AEP, UK, IT, EE)
C6	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V	(AEP, UK, IT, EE)
C7	1-162-910-11	CERAMIC CHIP	5PF	0.25PF 50V	
C8	1-162-964-11	CERAMIC CHIP	0.001uF	10% 50V	
C9	1-162-915-11	CERAMIC CHIP	10PF	0.5PF 50V	
C10	1-126-960-11	ELECT	1uF	20% 50V	
C11	1-107-826-11	CERAMIC CHIP	0.1uF	10% 16V	
C12	1-126-963-11	ELECT	4.7uF	20% 50V	
C14	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V	(AEP, UK, IT, EE)
C14	1-164-227-11	CERAMIC CHIP	0.022uF	10% 25V	(US, CND)
C15	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V	(AEP, UK, IT, EE)
C15	1-164-227-11	CERAMIC CHIP	0.022uF	10% 25V	(US, CND)
C18	1-126-934-11	ELECT	220uF	20% 10V	
C20	1-107-826-11	CERAMIC CHIP	0.1uF	10% 16V	
C21	1-126-960-11	ELECT	1uF	20% 50V	
C22	1-107-826-11	CERAMIC CHIP	0.1uF	10% 16V	
C23	1-126-960-11	ELECT	1uF	20% 50V	
C24	1-162-960-11	CERAMIC CHIP	220PF	10% 50V	
C25	1-162-968-11	CERAMIC CHIP	0.0047uF	10% 50V	(AEP, UK, IT, EE)
C26	1-162-927-11	CERAMIC CHIP	100PF	5% 50V	(US, CND)
C27	1-162-927-11	CERAMIC CHIP	100PF	5% 50V	(US, CND)
C29	1-104-665-11	ELECT	100uF	20% 10V	
C30	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V	
C31	1-162-919-11	CERAMIC CHIP	22PF	5% 50V	
C32	1-162-964-11	CERAMIC CHIP	0.001uF	10% 50V	
C33	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V	
C34	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V	
C35	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V	
C37	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V	
C39	1-107-826-11	CERAMIC CHIP	0.1uF	10% 16V	
C40	1-162-915-11	CERAMIC CHIP	10PF	0.5PF 50V	(AEP, UK, IT, EE)

Ref. No.	Part No.	Description			Remark
C41	1-164-230-11	CERAMIC CHIP	220PF	5% 50V	
C42	1-162-927-11	CERAMIC CHIP	100PF	5% 50V	
C43	1-162-919-11	CERAMIC CHIP	22PF	5% 50V	(US, CND)
C43	1-162-923-11	CERAMIC CHIP	47PF	5% 50V	(AEP, UK, IT, EE)
C44	1-164-230-11	CERAMIC CHIP	220PF	5% 50V	(AEP, UK, IT, EE)
C45	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V	(AEP, UK, IT, EE)
C46	1-107-826-11	CERAMIC CHIP	0.1uF	10% 16V	(AEP, UK, IT, EE)
C47	1-162-915-11	CERAMIC CHIP	10PF	0.5PF 50V	(US, CND)
C48	1-162-923-11	CERAMIC CHIP	47PF	5% 50V	(AEP, UK, IT, EE)
C49	1-161-051-00	CERAMIC	0.01uF	10% 50V	(US, CND)
C49	1-161-772-11	CERAMIC	0.1uF	10% 25V	(AEP, UK, IT, EE)
C51	1-162-919-11	CERAMIC CHIP	22PF	5% 50V	
C52	1-162-915-11	CERAMIC CHIP	10PF	0.5PF 50V	
C53	1-136-169-00	FILM	0.22uF	5% 50V	(US, CND)
C53	1-137-194-81	FILM	0.47uF	5% 50V	(AEP, UK, IT, EE)
C54	1-126-934-11	ELECT	220uF	20% 10V	
C55	1-162-927-11	CERAMIC CHIP	100PF	5% 50V	
C56	1-162-964-11	CERAMIC CHIP	0.001uF	10% 50V	
C57	1-162-964-11	CERAMIC CHIP	0.001uF	10% 50V	
C58	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V	(AEP, UK, IT, EE)
C59	1-162-927-11	CERAMIC CHIP	100PF	5% 50V	(US, CND)
C59	1-162-964-11	CERAMIC CHIP	0.001uF	10% 50V	(AEP, UK, IT, EE)
C60	1-162-964-11	CERAMIC CHIP	0.001uF	10% 50V	
C61	1-162-927-11	CERAMIC CHIP	100PF	5% 50V	
C62	1-162-927-11	CERAMIC CHIP	100PF	5% 50V	
C63	1-162-927-11	CERAMIC CHIP	100PF	5% 50V	
C64	1-162-927-11	CERAMIC CHIP	100PF	5% 50V	(AEP, UK, IT, EE)
C65	1-126-963-11	ELECT	4.7uF	20% 50V	(US, CND)
C66	1-162-927-11	CERAMIC CHIP	100PF	5% 50V	
C68	1-162-927-11	CERAMIC CHIP	100PF	5% 50V	
C70	1-162-910-11	CERAMIC CHIP	5PF	0.25PF 50V	(AEP, UK, IT, EE)
C71	1-162-927-11	CERAMIC CHIP	100PF	5% 50V	(AEP, UK, IT, EE)
C72	1-162-919-11	CERAMIC CHIP	22PF	5% 50V	(AEP, UK, IT, EE)
C73	1-162-919-11	CERAMIC CHIP	22PF	5% 50V	(AEP, UK, IT, EE)
C77	1-162-968-11	CERAMIC CHIP	0.0047uF	10% 50V	(AEP, UK, IT, EE)
C78	1-162-968-11	CERAMIC CHIP	0.0047uF	10% 50V	(AEP, UK, IT, EE)
C80	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V	
C93	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V	(AEP, UK, IT, EE)
C95	1-162-964-11	CERAMIC CHIP	0.001uF	10% 50V	

Ref. No.	Part No.	Description	Remark
		< CERAMIC FILTER >	
CF2	1-760-023-11	FILTER, CERAMIC (US, CND)	
CF2	1-795-426-11	FILTER, CERAMIC (AEP, UK, IT, EE)	
CF4	1-781-962-21	FILTER, CERAMIC	
		< CONNECTOR >	
* CNP1	1-785-663-11	PIN, CONNECTOR (PC BOARD) 11P	
		< TRIMMER >	
CT1	1-141-603-11	CAP, ADJ	
CT3	1-141-601-11	CAP, ADJ	
CT5	1-141-622-11	CAP, ADJ 50PF (AEP, UK, IT, EE)	
		< DIODE >	
D1	8-719-078-48	DIODE KV1471ETR1-3	
D2	8-719-078-48	DIODE KV1471ETR1-3	
D3	8-719-050-69	DIODE KV1520NT	
D10	8-719-988-61	DIODE 1SS355TE-17	
D11	8-719-988-61	DIODE 1SS355TE-17	
		< IC >	
IC1	8-759-662-67	IC TA2149N	
IC2	8-759-483-40	IC LC72137M-TLM	
		< RESISTOR >	
JC1	1-216-864-11	METAL CHIP 0 5% 1/16W	
JC2	1-216-864-11	METAL CHIP 0 5% 1/16W	
JC3	1-216-864-11	METAL CHIP 0 5% 1/16W	
JC4	1-216-864-11	METAL CHIP 0 5% 1/16W	
JC5	1-216-864-11	METAL CHIP 0 5% 1/16W	
JC6	1-216-864-11	METAL CHIP 0 5% 1/16W	
JC11	1-216-864-11	METAL CHIP 0 5% 1/16W	(US, CND)
JC12	1-216-864-11	METAL CHIP 0 5% 1/16W	(US, CND)
JC13	1-216-864-11	METAL CHIP 0 5% 1/16W	(US, CND)
JC22	1-216-864-11	METAL CHIP 0 5% 1/16W	(AEP, UK, IT, EE)
JC23	1-216-864-11	METAL CHIP 0 5% 1/16W	(AEP, UK, IT, EE)
JC24	1-216-864-11	METAL CHIP 0 5% 1/16W	(AEP, UK, IT, EE)
JC33	1-216-864-11	METAL CHIP 0 5% 1/16W	
JC34	1-216-864-11	METAL CHIP 0 5% 1/16W	
		< COIL >	
L1	1-409-775-11	COIL, AIR-CORE	
L2	1-416-509-11	COIL, AIR-CORE	
L3	1-754-116-11	ANTENNA, FERRITE-ROD (LW MW)	(AEP, UK, IT, EE)
L3	1-754-117-11	ANTENNA, FERRITE-ROD (MW) (US, CND)	
L4	1-411-199-31	COIL, MW/LW OSC (AEP, UK, IT, EE)	
L4	1-411-234-21	COIL, AM OSC (US, CND)	
L11	1-414-142-11	INDUCTOR 1uH (US, CND)	
L21	1-410-509-11	INDUCTOR 10uH	

Ref. No.	Part No.	Description	Remark
		< TRANSISTOR >	
Q12	8-729-028-99	TRANSISTOR DTC114YUA-T106	(AEP, UK, IT, EE)
Q14	8-729-905-35	TRANSISTOR 2SC4081T106R	(AEP, UK, IT, EE)
Q41	8-729-920-31	TRANSISTOR DTC343TK-T-146	(AEP, UK, IT, EE)
Q42	8-729-054-77	TRANSISTOR 2SC4098-T106-PQ	(AEP, UK, IT, EE)
Q43	8-729-920-38	TRANSISTOR 2SC2059K-T146-N	(AEP, UK, IT, EE)
Q44	8-729-054-77	TRANSISTOR 2SC4098-T106-PQ	(AEP, UK, IT, EE)
Q61	8-729-106-07	FET 2SK514TP-F	(AEP, UK, IT, EE)
		< RESISTOR >	
R1	1-216-815-11	METAL CHIP 330 5% 1/16W	(US, CND)
R1	1-216-817-11	METAL CHIP 470 5% 1/16W	(AEP, UK, IT, EE)
R2	1-216-817-11	METAL CHIP 470 5% 1/16W	
R3	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R4	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R7	1-216-853-11	METAL CHIP 470K 5% 1/16W	(AEP, UK, IT, EE)
R9	1-216-845-11	METAL CHIP 100K 5% 1/16W	(AEP, UK, IT, EE)
R10	1-216-805-11	METAL CHIP 47 5% 1/16W	
R11	1-216-827-11	METAL CHIP 3.3K 5% 1/16W	
R12	1-216-841-11	METAL CHIP 47K 5% 1/16W	(AEP, UK, IT, EE)
R13	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R16	1-216-833-11	METAL CHIP 10K 5% 1/16W	(AEP, UK, IT, EE)
R17	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	(AEP, UK, IT, EE)
R18	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	(AEP, UK, IT, EE)
R19	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	(AEP, UK, IT, EE)
R22	1-216-833-11	METAL CHIP 10K 5% 1/16W	(AEP, UK, IT, EE)
R24	1-216-813-11	METAL CHIP 220 5% 1/16W	
R30	1-216-835-11	METAL CHIP 15K 5% 1/16W	
R31	1-216-827-11	METAL CHIP 3.3K 5% 1/16W	
R32	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R40	1-216-849-11	METAL CHIP 220K 5% 1/16W	(US, CND)
R40	1-216-853-11	METAL CHIP 470K 5% 1/16W	(AEP, UK, IT, EE)
R41	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R42	1-216-845-11	METAL CHIP 100K 5% 1/16W	(AEP, UK, IT, EE)
R43	1-216-833-11	METAL CHIP 10K 5% 1/16W	(AEP, UK, IT, EE)
R50	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R51	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R52	1-216-809-11	METAL CHIP 100 5% 1/16W	(AEP, UK, IT, EE)
R52	1-216-864-11	METAL CHIP 0 5% 1/16W	(US, CND)

TUNER | VOLUME

Ref. No.	Part No.	Description			Remark
R53	1-216-829-11	METAL CHIP	4.7K	5%	1/16W (AEP, UK, IT, EE)
R53	1-216-835-11	METAL CHIP	15K	5%	1/16W (US, CND)
R54	1-216-817-11	METAL CHIP	470	5%	1/16W
R56	1-216-815-11	METAL CHIP	330	5%	1/16W
R58	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R59	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R60	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R61	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R63	1-216-829-11	METAL CHIP	4.7K	5%	1/16W (AEP, UK, IT, EE)
R63	1-216-833-11	METAL CHIP	10K	5%	1/16W (US, CND)
R64	1-216-821-11	METAL CHIP	1K	5%	1/16W (AEP, UK, IT, EE)
R65	1-216-833-11	METAL CHIP	10K	5%	1/16W (US, CND)
R66	1-216-805-11	METAL CHIP	47	5%	1/16W (AEP, UK, IT, EE)
R91	1-216-821-11	METAL CHIP	1K	5%	1/16W
R92	1-216-821-11	METAL CHIP	1K	5%	1/16W
R93	1-216-821-11	METAL CHIP	1K	5%	1/16W (AEP, UK, IT, EE)
R94	1-216-821-11	METAL CHIP	1K	5%	1/16W
		< TRANSFORMER >			
T1	1-433-741-11	TRANSFORMER, IF			
T2	1-419-465-11	COIL (DET)			
		< VIBRATOR >			
X1	1-760-130-11	VIBRATOR, CRYSTAL (75kHz) (AEP, UK, IT, EE)			
X1	1-781-592-11	VIBRATOR, CRYSTAL (75kHz) (US, CND)			
**********					
*	1-683-743-11	VOLUME BOARD			
		**********			
		< CONNECTOR >			
* CNP602	1-785-668-11	PIN, CONNECTOR (PC BOARD) 2P			
		< RESISTOR >			
R609	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R610	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R611	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R612	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R613	1-218-867-11	RES-CHIP	6.8K	5%	1/10W
R614	1-216-835-11	METAL CHIP	15K	5%	1/10W
R615	1-216-841-11	METAL CHIP	47K	5%	1/10W
		< SWITCH >			
S609	1-786-050-21	SWITCH, KEY BOARD (▶II)			
S610	1-786-050-21	SWITCH, KEY BOARD (VOLUME –)			
S611	1-786-050-21	SWITCH, KEY BOARD (VOLUME +)			
S612	1-786-050-21	SWITCH, KEY BOARD (■)			
S613	1-786-050-21	SWITCH, KEY BOARD (MODE)			
S614	1-786-050-21	SWITCH, KEY BOARD (REPEAT)			
S615	1-786-050-21	SWITCH, KEY BOARD (ESP)			
S616	1-786-050-21	SWITCH, KEY BOARD (MEGABASS)			
**********					
		MISCELLANEOUS			
		**********			
102	1-777-843-11	WIRE (FLAT TYPE) (30 CORE)			
103	1-769-326-11	WIRE (FLAT TYPE) (20 CORE)			
153	1-773-160-11	WIRE (FLAT TYPE) (21 CORE)			
256	1-773-070-11	WIRE (FLAT TYPE) (18 CORE)			
* 351	A-4902-666-A	MD ASSY (900AAA-RP)			
⚠359	8-820-137-02	OPTICAL PICK-UP KSS-900A/C2RP			
ANT1	1-754-226-12	ANTENNA, TELESCOPIC			
M702	A-4900-169-A	MOTOR ASSY (780CP), SLED			
S701	1-692-960-11	SWITCH, PUSH (1 KEY) (CD LID OPEN/CLOSE)			
SP1	1-544-988-11	SREAKER (10cm) (L)			
SP2	1-544-988-11	SREAKER (10cm) (R)			
**********					
		ACCESSORIES			
		**********			
⚠	1-477-050-11	ADAPTOR, AC (AC-X3CP) (US, CND)			
⚠	1-477-051-11	ADAPTOR, AC (AC-X3CP) (AEP, UK, IT, EE)			
⚠	1-770-019-11	ADAPTOR, CONVERSION PLUG 3P (UK)			
	3-239-034-13	MANUAL, INSTRUCTION (ENGLISH) (US, CND)			
	3-239-034-23	MANUAL, INSTRUCTION (FRENCH) (CND)			
	3-239-034-32	MANUAL, INSTRUCTION (ENGLISH, SPANISH) (AEP, UK)			
	3-239-034-42	MANUAL, INSTRUCTION (FRENCH, GERMAN) (AEP)			
	3-239-034-52	MANUAL, INSTRUCTION (DUTCH, PORTUGUESE) (AEP)			
	3-239-034-62	MANUAL, INSTRUCTION (ITALIAN) (IT)			
	3-239-034-72	MANUAL, INSTRUCTION (SWEDISH, FINNISH) (EE)			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifié par une marque ⚠ sont critiques pour la séurité Ne les remplacer que par une pièe portant le numéo spéifié

MEMO

REVISION HISTORY

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Ver.	Date	Description of Revision
1.0	2002.02	New
1.1	2002.03	Addition of AEP, UK, Italian, East Europian models
1.2	2002.10	Correction of EXPLODED VIEWS (SPM-02048)